

THE
Gentleman's Companion,
AND
Tradesman's Delight.

CONTAINING,

The Mystery of DYING in all its Branches. The Manner of preparing Colours. The Method of cleaning and taking out Stains from Silks, Woollen, or Linnen. To clean Gold or Silver Lace, and Plate. To prepare a Cement for China, or Glass.

The Art of Drawing, Limning, Painting, Etching, Engraving, Carving, Gilding, Enamelling, and Refreshing PICTURES.

Likewise the Quality of Natural and Artificial METALS. How to harden or soften them. The Art of foldering, burnishing, and gilding Metals. To make all Sorts of Ink To prepare Gold and Silver for Writing. To make Sealing-Wax, or Wafers. To know the Purity of Gold or Silver, and detect counterfeit Coins.

The great Mr. *Boyle's* Method of writing in such a Manner as cannot be discovered without the help of Fire, Water, &c. To take Blots out of Paper. The Art of dressing, cleaning, and perfuming Gloves and Ribbons; and washing all Sorts of Lace.

Also the Method of Curing and Preserving *English* WINES in the best Manner. And some excellent Receipts in Cookery, Physick, and Surgery. With many other useful Things never before printed.

L O N D O N:

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The Right Hon^{ble}
John Earl of BUTE. &c.





THE
P R E F A C E
TO THE
R E A D E R.

 Having well considered, that a Book containing Varieties of this Nature, might be exceeding useful ; I thought it highly necessary for the Advantage of the industrious Part of Mankind, as well for the Increase of Profit as Pleasure, besides my own Experience to consult the best Authors, and greatest Masters, most approved in all Ages for their Skill and Dexterity in what I have ventured to lay down ; and from their Labours have extracted the very Quintessence of what they had brought to Perfection by many Years Study and Practice ; and not

THE PREFACE.

only so, but have rendred that which seemed difficult, and to many unintelligible, plain and easy to the meanest Capacity, adding a great Number of new and curious Receipts never before made publick: From whence I may justly term this Book, though small in it self, yet exceeding copious in what it comprehends. The Store-house or Treasury of Art, &c. nothing being omitted that I in the least conceived pertinent or conducing to the Illustration or Advantage of Subjects containing such Varieties as may be grateful or acceptable to all Lovers of Ingenuity, and a certain Guide to the Unskilful, and lead them to the Knowledge of Things worthy their most serious Consideration; and wish that every Subject it treats of may prove universally beneficial and-useful to the Readers.





Art's TREASURY, or a profitable and pleasing Invitation to the Lovers of Ingenuity, contained in many extraordinary Experiments, both delightful and profitable.

PART I.

CHAP. I.

The Art and Mystery of dying Silks, Stuffs, Cloth, Feathers, &c. in the most curious and delightful Colours, with the manner of ordering, making and preparing them.



SO pleasing to the Eyes of Mankind, are the various colours which we daily behold, that they captivate the Fancy with Wonder and Delight. Wherefore, I have thought it convenient, among the many stupendious Secrets and Curiosities this Book contains, as well tending to Profit, as Pleasure, if duly practised, to place the Art
of

of colouring, vulgarly called dying, in the Beginning, as an Introduction to the rest, it being much wanted, and frequently coveted by publick and private Persons, to be known, and rightly managed. Wherefore, for its better Improvement, take the following Rules and Directions.

To colour or dye Wool, or Woollen Cloth a curious Red.

Take a considerable Quantity of Alum, and dissolve it in Water, wherein Bran has been boiled and strained out, then put the Cloth, Wool or Yarn to steep in it, which being well steeped, put it into other clear Water, heating it over a gentle Fire, adding thereto Greening-Weed two Pounds to four Gallons of Water, stirring it about, but not suffering it to boil; then add a Handful of unslaked Lime, and as much Wood-Ashes, stirring about the Materials, adding yet a like Quantity of Lime, Ashes, and a Pound of the Powder of Log-wood, or Red-wood, and the like of Brazil, and in three or four Hours Time, a very fair Colour to your Satisfaction will be taken.

To dye Linnen Thread, or Cloth Red, &c.

Take a Pound of Samphire, and let it soak in 2 Gallons of Water for the Space of
twenty-

twenty-four Hours, heating it over a gentle Fire; then add half a Pound of the Powder of Brazil, two Ounces of Vermilion, and an Ounce of Alum, dissolved in a Pint of fair Water.

To dye a clear or pleasant light Red.

Take Wheat Bran half a Peck, two Ounces of Alum, boil them in four Gallons of fair Water, which strain through a fine Hair Sieve, then dissolve in it half a Pound of Alum, and the like Quantity of white Tartar, and put in the Stuff, Cloth, &c. intended for colouring, adding three Pounds of Madder, and perfect the Colour by a moderate Heat, without boiling.

To dye Silk a Sanguine Colour.

Take a Pound of Alum, and two Pound of Greening-weed, bruise them well and pour fair Water upon them; then add half a Pound of Ground Brazil; heat this Liquor over the Fire, and put the Silk in some Part of it, suffering it to seeth therein, and so renew it with the remainder, till you find your Colour take, and having so done three times, rince it in Lee of Oak Bark or Wood Ashes, and afterwards in Water.

To dye a Fair Blue.

Take Silk, Stuff, or Cloth that is white, and soak it in Water, then having wrung the Water out, add two Pound of Woad, a Pound of Indico, and three Ounces of Alum, then gently heat and dissolve them in the Water, and so dip your Materials, till you perceive the Colour has taken.

To dye a Purple Colour.

Take the Silk, Stuff, or Cloth that has already taken a Blue, and dip it in Brazil and Alum-Water, moderately heated, and you will soon perceive your Colour answer your Expectation.

To dye a Carnation.

Take a dry Purple, and soak it a Night in Man's Urine, then take your Cloth that has been soaked in Alum Water, and dryed again, and put it therein; let the Purple be first twice seethed in fair Water, then set another Vessel by the Fire, and let the Cloth take the Dye therein.

To dye a deep Red Carnation.

Take white Linnen or Woollen, Alum it well, then take a Pound of the Herb called
by

the *Dutch Foli* (which is to be found on the Banks of Ditches) *Indian Lake*, four Ounces, *Spanish Red*, two Ounces ; make of these and Alum Water a hot Liquor, and dip your Materials therein, at gentle Heats three or four Times, and it will afford a curious Colour.

To dye Silk Quoins a curious Red.

Steep your Silk first in Alum Water, giving it a gentle Heat, adding Bran Water thereto, then take a Pound and a Half of Greening weed, and so heat it up, put the Silk therein, but let it not seeth ; then take it out and rince it in Lee, and after that in Water, adding some Powder of Log-wood; then heating it up a second Time, the Business will be perfected.

To dye a fair Yellow.

Take the Stalks, Leaves and Seeds, &c. of Woad, the Roots being cut off, and soak them in a Lee of Wood Ashes for the Space of three Hours, after that seeth them, till you think they are sufficiently sodden ; then put them into hot Water and Urine, and heat them up moderately, straining the liquid Part through a Sieve, adding to every two Pounds of Woad, two Pounds of Verdigrase, with the Lee already boiled, stirring and

and mixing it well together in your Liquor for the space of three Hours, and when it is very hot, dip in it what you have a mind to colour, three or four times.

Another Way to dye a curious Purple, viz.

If it be Silk you intend to dye, you must take four Ounces of Alum and a Gallon of Water to one Pound of it, dissolving the Alum therein over a gentle Fire, then put in the Silk, and let it lie for the space of four Hours; then take of *Indian Lake* and *Indico*, each a quarter of a Pound, add likewise a Quart of Urine, and so heat them into a Dye, adding about a Handful of *Cochineal*.

To make a curious Green Water.

Take half an Ounce of *Verdigrease*, bruise it well, put the Yolk of an Egg to it, and a few Blades of *Safron*; then take of the Leaves of *Spurge* half a Handful, bruise them with a quarter of a Pint of *Vinegar*, straining the liquid Part through a Cloth, and mix it with the Materials before mentioned, so thin that it may take, either in dyeing or Painting.

To make a Black Water to dye Silk, Cloth, &c.

Take half a Pound of *Nut Galls*, add a Pottle of Water to them, an Ounce of
Lamp-

Lamp-black, and a Handful of Rust or filings of Iron; heat them up, adding half a Pound of Coperas; boil this Liquor till it is half consumed, then add a Pint of Gum-Water to it, and set it by for Use, &c. and it will prove excellent good, the longer it is kept, it being the better.

To dye Linnen or Silk a Rose Red.

Take to every four Yards and a half, a Pound of Nut-Galls, and seeth them in fair Water unbruised, for the space of two Hours, then pouring out the liquid Part into another Vessel, put your Linnen, &c. into it, and let it soak for the space of four Hours; then wring it dry, and heat it again in Alum and fair Water; adding half a Pound of Brazil Powder, and a Pound of Greening-weed, and so by gentle Heats make up your Colour to the Heighth.

To dye a fair Green.

Take Bran Water and Alum, a Gallon of the Former to a Pound of the latter, and boil them up till the Alum is dissolved; then let your Silk or Cloth lie therein for about a quarter of an Hour, then take more Bran-Water, and a few Handfuls of Woad, and put it therein till it become a dark Yellow; then add Verdigrease and Indico of each
half

half a Pound or more or less of the one or the other, as you would have it lighter or darker.

To make a good Black.

Take two Pounds of Galls, and half a Pound of Coperas, boil them in Water over a gentle Fire, putting your Silk, Stuff or Cloth therein, and stirring it about, then hang it to dry, and prepare your Dye in this manner, viz. Take a large Fatt, and put therein three or four Handfuls of Rye Meal, and half as much Swarf of the Grind-stone or Smith's Water, with two Handfuls of Elder Bark, and the like Quantity of the Rust of Iron; and having suffered it to stand for the Space of three Days, heat it up and put your Materials therein, &c.

To make a thick Water to work on Yellow Silk the best Way.

Take two Quarts of the best Varnish, add to it an Ounce of Flower of Brimstone, half an Ounce of Camphire, and let it seeth a while, then suffer it to cool, straining it through a Cloth to take away the grosser Part; and when you use it, let it be mixed with a small Quantity of Gum-Arabick Water.

To

To make a curious red Water.

Take two Quarts of fair Water, four Ounces of Gum-Arabick, a Pound of Faucet Woad, boil them together, till half be consumed; then taking it off the Fire, put into the Remainder half an Ounce of *Spanish* Green, and about thirty Grains of Cochineal, and use it as you see convenient.

To make a curious Blue Water for Silks Stuffs, or Woollen.

Take three Parts of Soap-boiler's Ashes, and one Part of unslaked Lime, make a Lee with them, and suffer it to settle, then add to the thinner Part poured off, a Pound of Bole Armeny, stirring them well together over a gentle Fire, adding a Pound of Woad and half a Pound of Indico, dipping what you intend to colour therein when it is very hot.

To work on Yellow Silk, White, Grey, or Azure, Colour.

Take a Pottle of fair Water, a fourth Part of Gum-Arabick, half a Pottle of Faucet Woad, an Ounce of Arsnick, the like Quantity of Turmerick ground small, boil them over a gentle Fire, putting a small Quantity of Grains therein, and use it as you see convenient.

*To make a Red Water for White Silk or Wool,
Green, Yellow, Violet, or Azure.*

Take two Quarts of running Water, and an Ounce of Brazil, boil them up till half be consumed; then take it off the Fire, and put in an Ounce of Grains, and a Quarter of an Ounce of Gum-Arabick, with a Quarter of a Pound of Alum-Powder, and let it stand all Night in the Morning you may use it.

To make Grey Florey.

Take Florey and soak it twenty-four Hours, at the end of which, wring it through a Cloth; then take the Ashes of the Vine, and make a Lee with them, and spread the Florey for the Space of two Hours upon a Table, and having put the Lee into three Vessels, take the Florey and put it into one of the said Vessels, and so shift it to the rest, putting Vinegar to it before you dip your Linnen, &c. and your Colour will be good.

To dye Linnen with Crampmede.

Use in this a Pound of Crampmede, to three Ells of Linnen, and put to it a Gallon and a half of Water, or proportionable to the Quantity, and warm it over the Fire, till it appears ready to boil; then add to it 2 Ounces of Galls, put your Linnen into it, and as often as you take it out, which must
be

be frequently, wring it, then having a Pot of fair Water ready heated with Alum dissolved in it, put the Linnen well wrung into it, and rub it over at the taking out, and dry it; but if you would have it the darker Colour, then it is requisite to have a Lee made with Lime Stones, or unflaked Chalk.

To dye Velvet, or other Things requiring it, the most curious of Blacks.

Take of Galls two Pound, Coperas half a Pound, Smith's Water a Gallon, the Powder of burnt Ivory an Ounce, of Oak Bark and Shoemakers Black ground to Powder, the like Quantity, and two Gallons of fair Water; mix them well together, and suffer them to stand in the Sun or some other warm Place for the Space of thirty Days, often stirring it about, then put your Materials therein, and as often as you dip them, hang them to dry, and your Expectation will be answer'd.

To make Bran Water much used in dying.

Take half a Peck of Wheat Bran, and two Gallons of fair Water, set them on the Fire, giving them a gentle Heat, which being done, put half a Pound of Alum Powder into it, and suffer it to stand a Week or more, stirring it sometimes before you use it.

To dye Wool or Woollen Yarn.

Take four Pound of Wool or Yarn, two Pound of Woad, put the Woad into a Kettle to two Gallons of Water; then throw in two Handfuls of Wood-Ashes, and when it boileth, put your Wool or Yarn into it, and let it remain there about half an Hour, then take it out and wring it and put it in again, and let it boil as long as before; and then if it was before a Brown Blue, it will be a dark Green or if it was White, it will be a Yellowish Colour. Thus much at present, in Relation to Colours for dying Silks, Cloth, &c.

C H A P. II.

The most curious Art and Method of colouring Skins, or any Pieces or Parcels of Leather or Bristles; as also of gilding Leather with Gold, laying with Silver or Lacquering, &c.

To colour Skins green.

TAKE the Leaves of Night-Shade, bruise them in a Mortar, strain out the Juice, and in a Pint dissolve two Ounces of Alum, and half an Ounce of Verdigrease, and heat them gently over the Fire; then suffering it

it to stand twenty-four Hours, strike the Skin over with it warm, and suffering it to dry, do it again till it has taken the Colour, which will be very lively.

To colour Black Leather after the manner in Germany, &c.

Take of the Bark of Elder two Pounds, of the Filings or Rust of Iron the like Quantity,; put to them two Gallons of Rain Water, and stop them up close in a Cask or other Vessel, and let them stand for the Space of two Months; then put to the liquid Part a Pound of Nut Galls beaten to Powder, and a quarter of a Pound of Coperas, heating them over the Fire, and suffering them to stand twenty-four Hours after, then use them with a Brush till the Skin has taken an excellent Black.

To colour White Leather the best Way.

Having hung your Skins in Chalk or Lime-Water till they are grown supple, that the Hair or Wooll may be stripp'd off; stretch them on Tenters or by Lines, and smooth them over; then take your Colouring mixed, according to the Purport of what you intend they shall take, and having first brushed them over with Alum-Water very warm, give them the Tincture, and dry them in the Sun or some warm House, and the

they will be useful on several Occasions, without any further Trouble.

To make White Leather Blue.

Take of Elder Berries a Quart, press out the Juice, and boil it with an Ounce of the Powder of Alum, and half an Ounce of Indico or Smalt Blue, and brush the Leather over with a fine Brush dipped therein three or four times, suffering it to dry between whiles, and the Business will be effected.

To colour Leather a fair Red.

Having rubbed your Leather well with Alum Water or alumed it, take stale Urine, boil it and scum it till half be wasted, then put to it an Ounce of the finest Lake with the like Quantity of Brazil in Powder, an Ounce of Alum, and half an Ounce of Sal-armonick, mix them well and keep them stirring over a gentle Fire about two Hours; use the Liquid Part, and your Expectation will be answered.

To colour your Leather a curious French Yellow.

Take one Part of Chalk, and another of Wood Ashes, and make a Lee therewith, then strain out the fine or Liquid Matter, put it into a Vessel over the Fire, and put into it Turmerick in Powder, and a little Saffron,

ron, then let it simmer till it becomes pretty thick, afterwards let it cool, and as you have Occasion use it, as before mentioned.

To colour Spanish Leather, &c.

Take what the *Dutch* call Pomplemelch, warm it, and rub the Leather therewith; then take of Venice tot Appelen, and having beaten it small, put a considerable Quantity of fair Water to it, and let it soften over a gentle Fire; then press out the Water, and rub or wash the Skin with the liquid Part often; then take the finest Shoe-maker's Black, and rub the Skin over with it, having in the Wetting added to it a little Vitriol or Coperas, and suffering it to dry, take Goose or Hog's Grease in a Woollen Cloth, and rub the Skin over with it for a good Space, where there is a good Fire to supple it in; then rub it over with your Hands till it disappear, or instead of Grease, Lin-seed or Train Oil may be used, and so in case of any other Colour, according as the Colours are designed.

To dye Bristles a curious Red for Brushes.

Take an Ounce of Brazil Wood in Powder, half an Ounce of Alum, a Quarter of an Ounce of Vermilion, and a Pint of Vinegar, boil them up to a moderate Thickness, and dip the Bristles in when it is very hot, suffering them

tinue for some time in the Liquor, and they will be of a curious Red.

To dye Bristles or Feathers a curious Green.

Take of Verdigrease an Ounce, Verditer the like Quantity, of Gum Water a Pint, mix them well together, and dip the Bristles or Feathers, they having been first soaked in hot Water, into the said Mixture.

To dye Bristles or Feathers Blue.

Take an Ounce of Indico, as much Bisse, a Piece of Alum of the Bigness of a Hazle Nut; put them into Gum Water, and dip the Materials into it hot, then hang them up to dry, and clap them well, that they may open. And so changing the Colours, you may in this manner dye the aforesaid Materials of any Colour, as for Black use Logwood, and Galls, for Purple, Lake and Indico; for Carnation, Vermilion and Smalt; for Yellow, Berries and Safron, with a little Tartar dissolved in your Gum Water.

To dye Ivory, Bone, or Horn a curious Red.

Take the Materials and soften them in Water wherein Tartar has been dissolved; then take Vermilion and Brazil, temper them well in Water, boil them up in a Liquor, and put your Horn, Ivory, or Bone into it, and suffer either of them to be there, it being
hot

hot, for a convenient Time, and taking them instantly out, cast them into cold Alum Water; and if they have not taken the Tincture at first, use them in like Manner a second Time; and so proportioning the Colours, you may in this manner proceed to make them take what Colour you please.

To marblè Books or Paper the best Way.

Take four Ounces of Gum-Arabick, dissolve it in two Quarts of fair Water; then provide several Colours mixed with Water in Pots or Shells, and with peculiar Pencils to every Colour, sprinkle them by Way of Intermixture upon the Gum Water, which must be in a Trough, or some broad Vessel; then with a Stick curl them and draw them out in Streaks, to what Variety you please; which done, hold your Book or Books close together, and only dip the Edges in on the Top of the Water, and Colours, very lightly; which done, take them off, and the plain Impression of the Colours in Mixture will be upon the Leaves, doing as well the Ends as the Front of the Book in like manner: And in this manner you may do Paper by dipping it on the flat, as also Linnen Cloth, &c.

To dye or colour Horse Hair, or any Hair.

Steep them in Water wherein a small Quantity of Turpentine has been boiled for
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the Space of two Hours; then having prepared your Colours very hot, boil the Hair therein, and any Colour, Black excepted, will take, but it will only take a dark Red, or dark Blue, &c. And after this Manner with Colours cold or but luke-warm, you may dye the Feathers on the Backs of Poultry, wild Fowl, Hair on Dogs, Horses, or the like, in as much Variety as your Fancy can suggest.

Another fair Red for Skins, &c.

Wet your Skins or Fells in Alum Water, in which has been dissolved a like Quantity of Salt with half as much Lime, when being again stretched and dried, take the last of Brewers Drink a Quart, put into it an Ounce of Brazil Powder, a quarter of an Ounce of Vermilion, and an Ounce of Alum Powder, thicken them over a gentle Fire, by continual Stirring, and so with a Brush or Cloth, rub the Skins even over with it, not laying it thicker in one Place than another, repeat this three Times successively, suffering them only to dry the mean while, and your Expectation will be answer'd.

To dye Skins a Crimson Colour, &c.

Scrape hard Soap three Ounces, and dissolve it in fair Water, add to that three Ounces of Alum, boil them over a gentle
Fire

Fire; till the Water grow clammy, or a little inclining to thicken, then put a few Grains of Cochineal, half an Ounce of Lake; two Ounces of red Lead, a quarter of an Ounce of Vermillion, and a small Piece of Indico; mix them well by stirring them together, and keep them upon a gentle Fire, till they are about the thickness of the White of an Egg; then having first rubbed your Skin over with Alum-water, and suffered it to dry, apply this Colour, as has been directed in the former.

To colour Skins a light Blue or Turkey Colour.

Take Smalt two Ounces, red Wine a Quarter of a Pint, Alum two Ounces, Vinegar half a Pint, and white Starch half an Ounce; put them over a gentle Fire, not suffering them to become over thick; and then soaking the Skins with Alum-water, and suffering them to dry as usual, add to this colouring half a Pint of Gum-water tolerably thick, and lay it on, glazing it over when dry with a Polisher.

To colour a light Green.

Take the Herb called Horse Tail, bruise it, and add to the Juice a small Quantity of Verdigrease, Alum and Coperas, and over a gentle Fire, make it into a Colour; which will prove very pleasant and delightful.

To

To dress, or cover Leather with Silver or Gold.

Take brown Red, grind it on a Stone with a Muller, adding Water, and Chalk (the latter being dissolved) and with it rub, or lightly draw the Skins over, till they look a little whitish; and then, before they are quite dry, lay on your Leaf-Silver or Gold, placing the Leaves a little over each other, that no Interval be found; and when they have well closed with the Leather, and are sufficiently dried on, rub them over with a Polisher made of smooth Ivory, or of a Horses Fore-tooth, and you will perceive it very splendid.

Another Way of gilding Leather more lasting than the former, viz.

Take Glycer made of the Whites of Eggs, or you may for want of the former make Gum-water, and with a Brush run over the Leather with either of them; which done, lay on your Gold or Silver, and burnish it over as the former.

To make Leather shine without any Gold, &c.

Take Whites of Eggs, Gum-water, and Powder of Antimony, mix them well together, by beating, and having your Skins well dried, lay the Mixture on them, and do it often, till the Leather be quite hid; which done, let the Mixture dry; and then burnish

burnish them over; for want of Antimony, you may use black Lead.

C H A P. III.

How to recover faded Colours in Cloth or Silk; to take Spots, Stains, Pitch, Tar, Rosin, Grease, Wax, Oil, &c. out of Silks, Stuffs, Woollen or Linen; to preserve them from Damage of Worms, Moths, &c. and other Matters, &c.

TAKE of unslaked Lime two Ounces, of the Ashes of the Bark of Oak, the like Quantity, and put them in a Quart of fair Water, mixing them well, let them settle for the Space of an Hour, then draw off the clear Part, and therewith wash the Cloth over with a hard Brush, and by twice or thrice doing, it will look fair and bright

To wash Scarlet that is soiled or greasy.

Take two Ounces of white Tartar, beat it fine, and heat it over a Fire in a Pint of fair Water, till it be thoroughly dissolved and very hot; then suffering it to cool a little, take an indifferent hard Brush, and dip into it, rubbing it lightly over with the same, and by so doing in a short time it will return to its first Estate and Co'our.

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To

To restore Silks of any Colour in the like Nature as the former.

Take an Ounce of unslaked Lime, and the like Quantity of the Ashes of Vine Branches, and as much Oak Bark; mix them well together in fair Water, and make a kind of a Lee with them over a gentle Fire; which being settled, take the clear Part, and with a Brush or Sponge rub over the faded Part, and it will in a short time restore it.

To make a Soap to take Grease, Spots or Stains out of Cloth, Stuffs, Silks, &c.

Take a Pound of Roch-Alum, burn it well, and beat it into Powder, add to it the Powder of the Roots of Florence-flame, an Herb so called, about half a Pound, and to these add a new laid Egg, and two Pound and a half of Cake Soap; make them up with fair Water into round Balls; and when you are desirous to take out any Spot or Stain, wash well the Place first with warm Water, and then lay some of this Soap upon it with other warm Water, and in often so doing they will disappear.

An other excellent and approved Way.

Take Wood Sorrel and distil it in an Alembick with Fumitory, and wash the damaged

amaged Place therewith, and it will in frequently so doing restore it.

A Way to take Spots out of Linnen or Woollen, if coloured.

Take of the Juice of Lemons two Spoonfuls, one Spoonful of the Juice of an Onion, and warm them over the Fire, and with them often wash the Spots, and they will no more appear.

How to make a good Lee to take out Spots and Stains, viz.

Put into three Pints of Water half a Pound of Soap-boiler's Ashes, and suffer them to remain in it for the Space of Four Days, stirring it daily; then pour off the clear Water, and mix it as you see convenient with Fuller's Earth, and lay it hot on the Place, and it will with often using effect your Desire.

A very good Way to take out Spots of Oil out of Cloth.

Take Oil of Tartar, and mixing it with the Powder of burnt Stone, apply it to the Spot, and hold over or upon it a Spoon wherein is a live Coal, and the Heat thereof will attract the Grease and render the Spot invisible.

To take Pitch, Tar, Rosin, or Bees-wax out of any Stuff, Silk, or Cloth.

Take Oil of Turpentine, warm it a little, and apply it to the Place, suffering it to soak in for the Space of an Hour, and then gently rub it, and you will perceive the Rosin, &c. loosened, and instantly crumble away.

How to make a Soap Water to take out any Manner of Spots.

Boil Straw-berries, or the Leaves thereof in a Quart of fair Water, and a Pint of Vinegar; then add two Pounds of *Cajile* Soap, and half a Pound of Chalk finely scraped; boil them till the Moisture is consumed, and when you have Occasion, wet the Place with sharp Vinegar, and rub it over with this Soap, drying it afterwards against a Fire or in the Sun.

A speedy Way to take all manner of Spots or Stains out of Scarlet, or Velvet, of what Colour soever, not changing it.

Take Soap-wort, an Herb so called, strain out the Juice, it being bruised, and add to it a small Quantity of Black Soap, if the Scarlet be not dyed in clear grain, and these being made thin, wash the Place with the liquid Part, suffering it to dry between whites, and by this Means, in a Day or two, you will perceive the Spots to disappear. *To*

To take Iron Moulds or Stains out of Linen.

Take the Juice of a Lemon, warm it with a little Powder of Alum dissolved in it, wet the Linen with it, and as it is wet, dry it with a Spoon, wherein is a live Coal, and so continue to do for the Space of two Hours, and the Spot or Iron-mould in a washing or two will disappear. This likewise will take out Spots of Ink, &c.

The Manner to take Oily Spots out of Parchment or Oily Paper.

Take the Powder of burnt Bone finely sifted, and place between two Boards, pressing it hard, some of the Powder on either Side the Spot, and in two Days it will be quite vanished.

An excellent Way to take Spots or Stains out of Linen, viz.

Take fair Water, dissolve it in Bay-Salt, and steep the Linen therein ; then take the Juice of Sorrel and sharp Vinegar, and rub the Spot with them, suffering it likewise to soak in, and in often doing it will disappear.

To take away Ink Stains, Stains with Fruit, &c.

Take the Powder of Alum half an Ounce,
the Juice of Houseleek or Sengreen two
B 3 Ounces,

Ounces, and apply them, the Alum being dissolved very hot, and the Business will be effected.

Instructions how to keep Silks from staining in the washing.

Heat Rain Water, and when it is very hot, put into it *Castile Soap*, dissolve it well, then suffer it to be almost cold, after which sprinkle in a small Quantity of *Fulling Earth*, and so scour out your Silks; then suffer them not to lie in Heaps, but spread them, and clap them between clean dry Cloths, and they will be fresh and fair.

Directions to keep Linen laid up without using from Damage for many Years

Having washed, and well dried your Linen in the Sun, fold it up, and scatter in the folding the Powder of Cedar wood or Cedar small ground, having first perfum'd your Chest with Storax; by which Means, not only Dampness is prevented, but Worms or Moths, &c.

Further Directions to keep Woollen or Linen sweet and pleasant, as likewise from being damaged by Moths, Worms, &c.

Take Orange Peels, dry them in an Oven, and beat them to Powder, add to that Powder

der of Elicampane Roots, the Powder of Iris and that of Juniper, and air your Cloaths, when you lay them up, over a Fire wherein Bay-leaves are cast and burnt.

A pleasant Water to preserve Linnen, or any other Thing a long Time, giving it moreover a curious Scent.

Take of Spike-flowers two Pound, Costmary one Pound, Balm an Handful, Penny royal as much, Mace two Ounces, Iris Powder an Ounce, soak these in white Wine, and distil them, and sprinkle your Cloaths in a fair Day, suffering them afterward to dry, and then lay them up.

A good Way to wash any Linen or Woollen interwoven with Gold or Silver, and not to impair it.

Dip the Part you design to favour in Urine and Alum, and suffer it to be well soaked; then soap the rest, but not that Place, and having washed it hang it to dry in the Shade, and your Expectation will be answered.

To remove Stains occasioned by Wine or Vinegar.

Take new Milk, and steep the Thing stained therein a Night; then take Runnet,

and apply to the Stain, rubbing it in ; and by so doing twice or thrice, you will find it fair as at first.

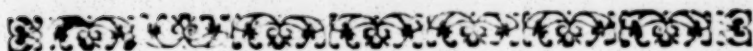
*To make Linen that is turned yellow,
very white.*

Heat Milk over the Fire, and add to a Gallon a Pound of hard Soap scraped, so that it may dissolve ; and when the Clothes have boiled therein, take them out, and clap them into a Lather of hot Water, and wash them out speedily.

To whiten Cloth the best Way.

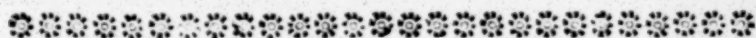
Take your Cloth, and buck it well ; then spread it upon the Grass, and sprinkle it with Alum-water, suffering it to continue abroad for three or four Days ; then buck it again with Soap and Fullers Earth, and use it as before, and it will be both thick and white.

C H A P.



C H A P. IV.

Directions to scour Silver and Gold Lace; make Plate bright, and look like new, take Spots and Stains out of it; to diaper Linen, whiten Ivory; make Cement for broken Glasses, &c. Perfumes of divers Kinds, Musk-balls, and many other Things, &c.



To scour Silver and Gold Lace, and to restore it to its first Lustre, as also Imboss, or Embroidery.

TAKE the Lace, and lay it smooth as may be upon a dry Woollen Cloth; then burn Alum, and beat it to Powder, sifting it afterward through a very fine Sieve; then with a Brush rub it gently over the Lace, and by so doing, and often turning it, the Business will come to perfection. And thus,

To scour and take Stains out of any Silver Plate.

Steep your Plate in Soap-lees for the Space of four Hours; then run it over with Whit-

ing wet with Vinegar, so that it may stick thick upon it, and dry it by a Fire; after which, rub off the Whiting, and pass it over with dry Bran, and the Spots will not only disappear, but it will look exceeding bright.

To boil up Plate that it may look like new.

Take of unslaked Lime a Pound, of Alum the like Quantity, Aqua Vitæ and Vinegar of each a Pint, of Beer Grounds two Quarts; boil the Plate in these, and they will set a curious Gloss upon it.

To make any Linen at the first Appearance look like Diaper.

Take it when new washed, spread it upon a Table somewhat damp, and sprinkle it over with a Brush dipped in Alum and Rose-water, in Form and Manner as shall best suit with your Fancy.

To whiten any Piece of Ivory that is turned yellow, as also Bone, &c.

Take a Pound of Quick Lime beat small, and place it on the Ivory, till it be covered; then pour gently and by Degrees Vinegar thereon, and so suffering it to lie for the Space of twenty four Hours, take it out, and rub it

it with Alum-powder, and the first Whiteness will be restored: and in the like manner Bone may be used and ordered.

A good Way to cement broken Glass, or China Ware.

Take the Whites of two Eggs, half an Ounce of Quick-lime beaten to Powder, a Dram of the Powder of calcined Flint, and the like Quantity of Gum-sandricks, temper them well together, and add for the better moistening a little Lime Juice; then with a Feather rub it on the Edges of the broken Vessels, and clap the Pieces together by a warm Fire, and if your Hand be light and steady in the Performance, the Fracture will hardly be discerned.

To remove Spots and Stains out of very thin Silks, &c.

Take White-wine Vinegar a Pint, make it indifferent warm, then dip a black Cloth into it, and rub over the Stains; then scrape Fullers-Earth on it, and clapping dry Woollen Cloths above and beneath, place an Iron indifferently hot on the uppermost, and it will draw out the Spot, &c.

*To make an excellent Perfume for preventing
Pestilential Airs, &c.*

Take Benjamin half an Ounce, Storax the like Quantity, as much Galbanum, temper them, being bruised into Powder, with the Oil of Myrrh, and burn them in a Chafing-dish ; or, for want of these, take Rosemary, Balm and Bay Leaves, heat them in Wine and Sugar, and suffering the moisture to consume, let them likewise burn by the Heat of the Pan, and they will cast a curious Scent.

To Perfume Clothes.

Take the best Cloves an Ounce ; dry them in an oven, and beat them to Powder ; do the same by a like Quantity of the Wood of Rhubarb and Cedar, and sprinkle them in your Box or Chest, and they will not only cast a curious Scent, but likewise preserve them against Worms and Moths.

*A curious Scent, or Perfume, to carry with one,
when going abroad in damp Airs, or to visit
sick or infected Persons, and is wonderful
good for all Pains in the Head.*

Take Orange flower Butter an Ounce, Oil
of Nutmeg a Quarter of an Ounce, Amber-
grosse

grease a Dram, and Civet a Scruple; mix them well together, and carry a small Box of it about you, smelling to it as you have Occasion.

To make a sweet scented Powder very pleasant.

Take Rice-grounds, and the small of white Starch a like Quantity, pound them in a Mortar, and sift them well through a fine Sieve, dry the Dust in an Oven or before the Fire; then add to each Pound a Grain of Civet, and half an Ounce of Rose-scent, and keep it close stopped up, and then use it for your Hair, or otherways at your Discretion.

To make scented Wash-balls the best Way to keep, &c.

Take Castile-soap, scrape it into new Milk, and heat it over the Fire, till it melt and again become thick, then put a small Quantity of Amber-grease, Lavender cotten Flowers beaten, and dried, till they are as fine as Meal, and a little Oil of Cloves or Cinamon, and so make them up into Balls, and lay them a drying in a warm Place, but not in the Sun.

A Per-

A Perfume to drive Vermine out of a House, &c.

Take Burgundy-Pitch an Ounce, Brimstone half an Ounce, Storax the like Quantity, the Powder of Amber a Dram; beat and mix them well together, and burn them upon a Chafing-dish, and where the Scent comes, the Mice and Rats will fly to avoid it.

An Ointment or Perfume to remove an evil Scent that has tainted the Brain, &c.

Take of the Oil of Bay-berries, half an Ounce, of the Powder of Frankincense a Dram; the Oil of Mace a Scruple, as much of the Oil of Turpentine; mix them well together, and keep them in an Essence-bottle.

How to make an Essence that will immediately perfume the Place.

Take Cinamon an Ounce, Camphire half an Ounce, Opopanax a Dram, Roses clean picked a Handful, Rue and Rosemary flowers the like Quantity, Myrrh a Dram; bruise them well, and put them into a small Alembick or glass Retort, and take the essential Part in a Bottle, stopping it close, unless when Occasion requires it, and then by opening it, you will suddenly find the Effects answer your Expectation.

CHAP.

C H A P. V.

The curious Art of drawing in all its Perfection, as well human Bodies, as Birds, Beasts, Fish, Landskips, Building, and many other rare Portraits, by plain and easy Rules, in due Proportion and Manner.

SINCE limning or drawing is an Art very curious, much admired, and sought after in all Ages, and especially in the present, I have thought it convenient to lay down Methods and Rules for the Instruction of Learners especially, thereby to enable them for greater Acquirements, &c.

The first material Thing to be known, is, the necessary Instruments requisite to be used on this Occasion; which are first Sallow-coals, or Sallow-wood burnt to a Charcoal, that it may be sharpened in the Form of a Pencil, to touch over lightly the first Draught. *Secondly*, The out Feathers of a Duck's Wing, to wipe off, as you see Occasion, what is superfluous, or the Matter designed to be altered. *Thirdly*, Black lead Pencils well pointed, to go over your Draught the second Time. *Fourthly*, Pens made of Ravens or Crows Quills, to finish the Design, by giving a more curious Piece. *Fifthly*, A Rule and a Pair of Compasses with

with three Points, to take in and out at Pleasure, the one for black Lead, the other for white Chalk or red, or any other Paste; and the Use of the Compass is to be observed in most Drawings, to mark out the equal Distances after your Out-strokes are drawn:

Having the forementioned Things in Readiness, proceed to Practice; and in the first Part begin with a plain geometrical Figure, such as a Circle, Oval, Square, Cone, Cylinder, Triangle, which accordingly you may mark out with your Rule and Compass, till you can readily do it without them; for a Circle well carried, will be very useful in any orbicular Form, as the Sun, Moon, Globe of the World, &c. the Oval is a Direction for the Mouth, Face, the Foot of a Wine or beer Glass, &c. the Square is very useful in confining the Picture you are to copy. The Triangle wonderfully assists you in making half a Face. The Cone will assist you in drawing Colosses, Spires of Steeples, and the like. The Cylinder assists you in drawing Pillars, Pilasters, Columns, together with their Ornaments proper to Architecture, &c.

Having considered the Matters premised, proceed to draw Pears, Cherries, Apples, Appricots, Peaches, Grapes, Straw-berries, Pease-cods, Butter-flies and other Insects with Flowers and Branches of Trees in their Proportion,

portion, and being a little perfect at these, proceed to the third Practice, which is usually imitating Beasts, As,

1. Those that are more heavy and dull, viz. the Elephant, the Bear, Cow, Ox, or Bull, and sometimes Sheep and Goats; then those more nimble and fleet, as the Horse, Stag, Hart, Unicorn, Tyger, Lyon, &c. And for Birds, practise the Eagle, the Swan, the King-Fisher, the Parrot, the Partridge, the Pheasant, and such-like; then again, for Fish, the Whale, Salmon, Pike, Carp, Herring, Mackrell, Lobster, and such other Fishes, as are most in use, to adorn a Chimney-piece, &c. and from these, proceed to Mellons, Pumpkins, Ears of Corn, Cucumbers, Parsnips, Carrots, Cabbages, &c. when having practised your Hand in their Proportion, and knowing the proper Colours, of which I shall treat hereafter, you may easily form and illustrate them, though the Excellency of this Art consists in drawing a human Body to the Life: And because it ought not rashly to be all drawn at once, I shall proceed to these in Order, especially as to the Rules in general.

C H A P.

C H A P. VI.

To draw the Face in divers Postures and Proportions, the most exact Rules, and what Variety is to be considered therein.

General Rules for drawing the Face, &c.

IN this Case curiously observe the Face in its Motion, whether upward, forward, downwards, or side-ways, touching lightly the Features, where the Eyes, Nose, Mouth, and Chin ought to stand; then more perfectly go over them; for the Circles, Squares and Triangles, that are used in this Matter, may serve well enough to guide your Judgment where to place them. And in this Case, observe diligently the principal Muscles of a Face, appearing most in aged Men or Women. And there is a threefold Proportion usually observed in a Face; as *First*, From the Top of the Fore-head to the Eye-brows. *Secondly*, From the Brows to the Bottom of the Nose, and *Thirdly*, From thence to the Bottom of the Chin: But in some the Fore-head is lower, and in others the Nose longer.

The Distances between the Eyes consist in a full Face of the length of one Eye, but in a three Quarter, or Side-face, that
Distance

Distance is lessened answerable to the Proportion. As for the Nostril, it ought to be exactly placed against the Corner of the Eye. And in a fat Face, you will perceive the Cheeks to swell; when on the contrary, in a lean Face, the Jaw-bones stick out, and the Cheeks fall in.

You may discern a smiling Countenance, by perceiving the Corners of the Mouth to turn up a little; and a frowning or sower Countenance, by the Fore-heads bending, and somewhat wrinkling on the Top of the Nose.

To draw a fore-right Face, make the Form of a perfect Oval, divided into three equal Parts, by two Lines. In the first Part, place the Eyes: In the second, the Nostrils: And in the third, the Mouth; observing to keep the Eyes distant from each other, the length of one Eye, and that their inward Corners be perfectly over the Outside of the Nostrils.

To draw an upright Head, it must be made equal with three Lines, every Way, either upwards, downwards, higher or lower, and that must, as the former, be divided into three equal Parts.

To draw the inclining, fore-shortened Face; observe how the Lines agree together, and with ease, you may draw, in their proper Places, the Nose, Mouth, and other Parts,

Parts, with a little Practice; and it is requisite that you should be very perfect in these Forms, as being Rules of frequent Use; for of the many Parts of Man's Body, the Face is most difficult; but having got the true Proportion, with your Measures, you will be capable, let the Face turn which Way it will, to form it; and further note, that whatsoever Proportion the Face you are to imitate bears, your Out-stroaks must be formed accordingly.

As for the Nose, it requires to its due Proportion much Care and Diligence, as being the most eminent Part of the Face; in which, especially, observe the Hollowness, Roundness, and indenting of the Nostrils, &c.

The next Thing to be considered, especially where the Body is to be covered, are the Hands, in their several Postures and Positions, as well by Measure, as without; as also Hands, and Arms of whose Postures, as well as the former, it would not be unnecessary for the Learner to get Draughts for his better Imitation, which may be had at most Picture-shops, for a small Matter ready done.

When you have practised, and are a little expert in drawing the Hands and Arms, &c. proceed to the drawing of Feet in their several Postures, as well without, as with
Measure;

Measure; which having attained separate, exercise your skill in drawing Legs and Feet joined together; that so understanding the Frame and particular Parts of the whole Body, you may the better understand drawing the Figures in their due Proportion and right Postures, in doing which there is no small Difficulty. And in this Manner, having proceeded to form the Members, draw the other Parts of the Body, as the Shoulders, Back, Breast, Belly, Secrets, Thighs, and the like; and lastly take Care in due Proportion to join them, that they may appear firm and compleat.

Coming to practise upon an entire Body, the best Way is to begin with those of Children; and my Reason is, because they are generally fat and plump, and rounder than the Bodies of Men and Women, and consequently require not so much Curiosity in the Observation of Muscles and other Features, which render the drawing less difficult.

As for your further Direction in drawing, observe ever to begin at the Head, and so proceed by Degrees, running the Whole lightly over at the first, and encreasing more fully, as you see Occasion; ever being careful to take Notice, that your parallel Joints, Muscles, Sinews, &c. be rightly proportioned, and exactly opposite; also that the Members of the Body be answerable to each other,

ther, and that the Parts and Limbs have a due Symmetry, not being faulty in the Indecency of having one great Arm or Leg, and another small one, nor a great Finger upon a small Hand; neither further than the Proportion requires, suffer one Limb, or Member to be longer than another; and although it so happen, which it frequently does, that at first you commit Errors of this Nature, yet be not discouraged, for frequent Practice will redress them.

Having thus far proceeded with Success, and being indifferently perfect herein, you must consider what it is to shadow; and in this Case, observe the following Rules, *viz.*

The out Lines of the Draught of any Picture, give the Symmetry or Proportion, which ought to be sufficient to a good Judgment; but the Lines and Shadows produce to the less curious, the lively Likeness in Shadowing; therefore of any Picture, you must take Notice to cast your Shadow always one Way, *viz.* on which Side soever you begin to shadow your Figure, whether on the right or left Hand; as in the Figure of a Man, if you first proceed to shadow his left Cheek, the left Side of his Neck, Body, and all other Parts must be shadowed, unless the light Side of the Figure be dark, by reason of some other Body standing between the Light and it; as suppose three Men
were

were standing together ; then must the Body, or Figure in the middle be darkened by the foremost, unless the Light by facing it come between them.

Further, note, that all Shadows must consequently grow fainter, as they are further removed from the opaque Body from whence they proceed. But in Case of Storms, where Clouds, or Waves, by contending Winds, are driven one against another, contrary Shadows are allowed, as striving for Superiority, and so you must be sure to supply the greatest first, and according to your Judgment supply from them the lesser.

All circular Bodies must have a circular Shadow, as they have a circular Form, and as the Object of Light which caused the Shadow is circular.

And now for your further Information of this Kind, observe, that a Man standing, from the Top of the Head, to the Bottom of the Feet, is in due Proportion eight Times the Length of the Head. The Arm when it hangeth straight down, reacheth within a Span of the Knee ; the Hand must be the length of the Face, and, spread abroad, must cover it, and no more ; and further note, that in drawing a Figure standing, you must in the first Place draw that Leg, which the Body stands firm upon, or
elle

else your Figure will undecently decline one Way more than another, as if it were falling. The Arms of a Man extended are his full Length; and so of a Woman in the various Particulars. Thus having directed you in the drawing and proportioning naked Figures, I now proceed to give Directions about Garments, &c.

As in naked Figures, it is observed you draw the out Lines first; so you must do in Drapery or Cloathing, leaving Space within for your greater or lesser Folds; then first draw the greater Folds, and break them into lesser contained within them, and the closer the Garment sits to the Body, the narrower and smaller must be the Folds, and in shadowing, the innermost must be the harder, and the outermost softer.

Continue the great Fold always throughout your Garment; but as for the lesser, break them off, as you see convenient; and the finer your Drapery is, the fuller and sharper must your Folds be, and the Shadow the stronger, yet more pleasant to the Eye; ever taking Notice, that that Part of any Garment that sits close, as the body Coat of a Man, the Breasts of a Woman, and the like, must not at all be folded, but rather with a sweet Shadow represent that Part of the Body, that the Garment appears to cover, as a Woman's Breasts, with a sweet
round

round shadow, &c. And thus much for the body of Man in drawing.

C H A P. VII.

Landkips, what they are, and what is required in the drawing, and curious proportioning them pleasant to the Eye and Fancy, &c.

A Landskip is that which giveth a pleasant prospect of Trees, Hills, Rivers, Cattle, and other rural Objects, with Towns, Cities, Castles, Promontories, Rocks, Ships, Boats, Barges, and whatever of that kind the Fancy can form. To express which, and make all truly appear naturally, as they ought, according to the true proportion and distance, observe in every Landskip, to make a very fair Horizon appear, the Sky either clear, or over-cast with Clouds, expressing the rising or setting of the Sun, to issue as it were from or over some Hill, Mountain or Rock ; but in a fair Landskip, beware you express not the Moon or Stars, which are only to be seen in a Night-piece ; and in case such a piece be required, you may draw an Astronomer with his Quadrant, taking the height of the Moon ; another with his Cross-staff, taking the distance of certain Stars ; some standing with a dark Lanthorn far from them, to give them knowledge of
C
their

their degrees ; an Owl flying in the Air ; Men catching of Partridges with Low-Bells ; a Wolf worrying of Sheep, and the like ; being natural to such Pieces.

If in any fair Landskip you express the Light of the Sun, ever observe, throughout your whole Piece, you cast the Light of your Trees, Buildings, Rocks, Ruins, and all things mentioned, or express'd within the work thither-ward : observe further to lessen your Bodies proportionably, according to the nearness, or distance they should naturally appear, so that the farther the Landskip goeth from your Eye, the fainter you must express any thing seen at a distance, till at last the Earth or Water and Sky seem to meet, as do the Colours in a Rain-bow ; wherefore when at any time you see good pieces of this kind, take your observation more particularly from them, and imprint the Fancy, as well as may be in your Mind.

CHAP. VIII.

The curious and much esteemed Science of Painting or Limning in Water Colours, and how exactly to proceed therein, either on Parchment, Glass or Copper; with the mixture and distinction of the sundry Colours, and other rare Curiosities.

HAVING gone over that which we may properly term Limning, or as many will

will have it, Drawing ; I now come to that Part, vulgarly known by the Appellation of Limning, *viz.* laying in Water Colours, the most curious of all, and much practised by Persons of the best Quality.

To fit your self, and prepare for the practice of this, you must have Gums of all Sorts to make your Waters, as occasion requires ; also a Marble flat Stone, a Muller, Colours of various sorts, liquid Gold and Silver, Size to lay Gold, &c. Parchment, the finest Pencils of sundry Sorts, Pots and Shells to put your Colours in.

To make your Gum-water. Take Gum-arabick, white, clear, or transparent, for that which is yellow, or of an Amber colour is insignificant ; tie up a Quantity in a Rag, and hang it in fair Water, till it be dissolved ; then the Water being stiff enough for your Purpose, mix your Colours with it, always having two Sorts to make a weaker or stronger, as the Matter requires.

Gum-lake is a Compound Gum, made of whites of Eggs finely beat, Honey, Gum of Ivy, Strong-wort, &c. which being well mingled and beat together, they will run like Oil, and in the End harden ; and this you may buy ready made, as the former, observing only, that it be clear and transparent.

As for the Colours, there are simply six, *viz.* white, black, red, yellow, green, and blue, to which some add browns, but they

are generally compounded; and of either of these, there are several sorts, viz. Blacks the best, are burnt Ivory, Cherry-stones, Lamp-black. The whites are Cerufs and white Lead. The reds are red Lead and Lake. The blues are Indico, Ultramarine, Bise, Smalt. The Greens are Bise, Sap-green, Pink, Cedar-green. The yellows are English Oker and Masticote. The Browns are Umber, Collen's-earth, *Spanish-brown*.

These (though there are others) are the principal Colours in Limning; and therefore, I chuse to speak of these only in this Place, the others omitted, being fit only to colour Pictures or wash Maps, &c. and of these

The Colours to be washed are Bise, Smalt, Cedar, Ultramarine, Masticote, and red Lead. The Sap-green is only to be steeped, and the rest I have mentioned are to be washed and ground.

To wash Colours, you must put a quantity of the Colour intended into a clean earthen Dish, and pour Water thereto very clear, stirring the Colour and Water together, suffering it to stand a-while, and perceiving the Grease or Scum to rise, take it off, and pour out that Water, putting other Water to the Colour, &c. and so do, till the Water become clear, and the Colour at the bottom remain Fine: then pour away the Water gently, and you will find the Colour sticking
about

about the sides and edges of the Dish, as also at the bottom; and if it so happen, that you can get an Ounce of pure Colour out of a Pound (tho' the rest is serviceable for many Uses) it is sufficient.

In steeping Sap-Green, you must put it only into fair Water, adding a fourth Part of Alum powder to raise the Colour, and at the end of twenty four Hours it will be a curious Green.

As for the Colours that are to be Washed and Ground, take a small Quantity of either, and put it into a clean Shell, adding a drop or two of Gum-water, and work it about the sides of the Shell with your Finger, suffering it to stick to it till it is dry; then draw your Finger over it, and if any come off, then you must add more Gum-water; but being dry, if it glitter or shine, it is a Token there is too much Gum in it, which you must remedy, by tempering it up with fair Water only.

There are some Colours, as Umber and Lake, which parch and crack when they are Dry, and therefore to bind them, you must temper them with fine Sugar-candy dissolved in fair water; and so you must do by other hard Colours subject to this defect.

To burn the Colours proper for this Use, put them into a Crucible, cover it with a Lid of Clay, and set it on a hot Fire, and suffer it to be red Hot, and when the Colour

is cold, you may wash or grind it, as the Nature requires, but do neither before they be thoroughly burnt.

To grind the Colours I have directed so to be used, take a Quantity of any of them cleansed from Dirt and Filth, and laying it upon your Stone, bruise it a little with your Muller; and then with fair Water grind it, till the Colour be very fine; then have in readiness a large chalk Stone with Troughs or Furrows in it, and pour your Colour into it, and there suffer it to remain till it be well Dried, then take it out, and reserve it in Papers or Boxes for your Use.

Of these six^e simple Colours, adding the Brown, many may be compounded for Faces of all Complexions, Garments, Landskips, Building, Rivers, Birds, Fish, Beasts, &c.

As thus,

To make Violet Colour, take Indico, White and Lake; and you may, as you take more or less of a Colour make it lighter, or darker at Pleasure.

Lead Colour, you may make of Indico and White mixed and tempered together.

Make Flame Colour, or Colour for flaming Fire, of red Lead and Masticot heightened with white.

To make a scarlet Colour, take red Lead, Lake, and a small quantity of Vermillion:

For Note, that the latter is not good in Limning.

To

To make Light Green, take Pink, and Smalt, with White, to make it lighter, as Occasion requires.

To make a Purple Colour, take Indico, Spanish Brown, and White well temper'd and heighten'd.

To make a Bay Colour, take only *Spanish* Brown and White.

To make a Murrey Colour, take Lake and White.

Many other Colours are made by Mixture, too tedious here to be recited ; wherefore, I leave them to the Discretion of the Practitioner, to mix them suitable to his Work or Fancy, and proceed to the practical Part of this curious Art, &c.

CH A P. IX.

Instructions for the preparing your Tablets, and laying on your Colours in their graceful Shadows and Proportion, and what is to be observed, as to the Lines in the Face, Complexion, and Procedure in curious Drawing, &c.

WHen you have prepared your Colours, prepare likewise good Pencils ; to know them, draw them wet through your Mouth, and if they come to a Hair, or sharp Point, they are good, but if they, after that,

stand rough, or Hairs stare, or start out at the Side, they are nought, and to be rejected.

The next Thing is to prepare your Table ; and, in this Case, get a fine Pastboard sleeked as smooth as a Card ; then fine Parchment, or Vellum, and starch it upon the Board, as smooth and even, that no wrinkle or rising may appear ; to perfect which, you must lay the Parchment-side on your Stone rubbed very clean, and polish the contrary Side, and so let it dry in the Shade.

Having thus prepared a Table, as big as you intend your Picture, chuse a Light fair and large, free from Shadow, being, if possible, a Sky-light on the Top of a House, yet such a one, as the Sun-beams do not penetrate, or glance upon, observing to begin and end your Work by one and the same Light, keeping the Room clean, that no Dust may fly about to prejudice your Work.

The next Thing to be considered is your Manner of sitting ; and, in this Case, let your Desk be so placed, that when you sit before it, your left Arm may be placed toward your Light, and your right Arm from it, that your Light may flaunt upon your Work. And if you are to draw the Picture of any live Person, the Posture being agreed upon, suffer him or her to sit above two Yards distant from you, and as level with you as may be, marking well, that whenso-
ever

ever the Party moves, though never so little, for never so little Motion of the Body or Face, if not recalled, may occasion, in a short Time, many Errors ; and when you undertake this, the following Materials are requisite to be near you, *viz.*

Two small Dishes, or Saucers, with clean Water, the one to wash your Pencils in when foul, and the other to temper your Colours withal ; a fine large Pencil to cleanse your Work, called a Fitch-pencil ; a sharp Pen-knife, to take off Hairs coming from your Pencil, or Spots that may fall upon your Card ; a Paper, having Holes cut therein, to lay upon your Card, to cover it from Dust, and to rest your Hand upon.

If your Carnation, or Flesh-colour be temper'd up, it must be somewhat lighter than the Complexion of the Party you are to draw. If it be a fair Complexion, you must have White-Lead, and Red-Lead well temper'd. If the Complexion be swarthy or brown, add to your White and Red-Lead, Masticote, or *English* Oker, or both, if Occasion require it ; but let the Complexion be what it will, be sure to temper your Flesh-Colour lighter than the Party to be drawn ; for if it be too sad, there is no Remedy ; and observe to place your Shadows distinct from each other in a large Shell. And note, That in all your Shadows you must use some White ; where-

fore, in the first Place, lay a considerable Quantity of White by itself, over and above what the Shadows are at first tempered withal. In the second Place, for Red usual to the Cheeks and Lips, temper Lake and Red-Lead. In the third Place, for your Blue Shadows, as Veins, or under the Eyes, take Indico and White. In the fourth Place, for your faintish Green Shadow, take *English* Oker, White, and Indico, or sometimes Masticote. In the fifth Place, for a deep Shadow, take White and *English* Oker, and Umber. Sixthly, for dark Shadows in the Faces of Men, take Lake and Pink, for they make an excellent fleshy Shadow. And these being the chief Shadows, I leave what may farther occur of this Kind, to your Discretion.

Having all Things in readiness, the next Thing you proceed to, is to draw the Face, in doing which, take the following Method, viz. Lay the Ground, with the Colour answerable to the Complexion of the Party; and then begin the Draught, the Party sitting. Now, to finish a Face, three Operations of Sitting are required. At the first Sitting, you must only lay the dead Colour. At the second, go over the Face more curiously, nearly observing whatsoever may conduce to the Grace, or Deformity of the Person to be drawn, considering it in a sweet Dispose, and well couching the Colours one within

within another. And in this Sitting you perfect what only was rough before, by laying on the deep Colours, so that at the third Sitting, you may finish the Face ; as in the Eyes, Eye-brows, Hair, and Ears, which Things are the last Work, and not to be perfected till the Hair, Curtain, or Back-side of the Picture, as also the Drapery be finish'd. And of these Sitzings in their Order.

The Operation of the first Sitting, &c.

Having laid your Ground for the General Complexion, the next Work must be to draw the Out-lines, which you must effect with Lake and White mingled, drawing very faintly ; so that if you chance to miss your Proportion, you may alter it with a deeper Mixture of the same Colour.

Having drawn the Proportion of the Face, add to the former Colour a small Proportion of Red Lead, tempering it faintly to the Colour of the Cheeks and Lips, at the Tips of the Chin, and Ears, about the Eyes, and the Roots of the Hair, placing the Red Shadows ; and as for the Shadows, they must not be put in with the Flat of the Pencil, but with small Touches, after the Manner of Hatching ; and in this Manner going over the Faces, you will cover your Ground with these and the like Shadows : And in these dead Colours, your Curiosity need not be great, only strive to imitate Nature as near

near as may be ; for the Roughness of the Colours may be mended at the second Operation.

Having duly placed and proportioned you Red Shadows, in the next Place put in your faint Blue Shadows about the Corners of the Eyes, and Balls, &c. and your greyish Blue under the Eyes, and about the Temples, working them sweetly and faintly over by Degrees, heightning the Shadow as the Light falls ; as likewise the hard Shadows in the dark Side of the Face under the Eyebrows, Nose, Chin, and Neck ; with some stronger Touches on those Places, than on the light Side of the Face ; and so bring all your Work together to an equal Roundness, giving Perfection to no particular Part at this Time ; but take a full View of your Object, and consider how near you hit the Life, not only in seeming Likeness, but Roundness, Boldness of Posture, Colouring, and such-like. And having by this Time wrought your fainter Shadows into the Red Shadows, you may venture to take a Touch at the Hair, disposing it in such Curls, Folds and Forms, as you shall see convenient for Grace and Ornament ; only drawing it with some Colour suitable to the Life, and fill up the empty Space with Colours, deepning it somewhat more strongly than before in the deepest shadowed Places. And this may suffice for the first Operation.

The

The second Operation, or Sitting.

In this Sitting the Party must take the same Place and Posture as before, and then be curious to delineate with your Pencil, the particular Varieties of Nature ; and as you drew them over but rudely before, you now must sweeten them with the same Colours, by working and driving them one into another, so that no rough Edge, nor Lump of Colour may appear ; and this must be done with a Pencil sharper than the former, by which Means the Shadow may be soft and smooth.

Thus having done, proceed to the Back-side of your Picture, and if a Curtain be required, as is the usual Manner, we will suppose it to be Blue Sattin ; to do it, temper as much Bise in a Shell as will cover a small Card, suffering it to be moist, and well bound with Gum ; then draw with your Pencil the Out-lines of your Curtain, as also of your Picture, and so lay it over very thin and airy with a large Pencil, that it may be the whole Ground you intend to do with Blue ; and then lay it over again with a substantial Body of the same Colour ; in doing which, you must be swift, keeping your Colour moist, and not suffering any Part to be dry till all be cover'd.

If it happen that your Curtain is to be Crimson, you must trace it out with Lake, and lay the Ground with a thin Colour ; observing

servings where your strong Lights and Reflexions fall, there lay the Lights with a thin and waterish Colour; and the Ground being yet wet, lay the strong and hard Shadows close by the other Lights, with a dark Colour, temper'd reasonably thick.

Thus having laid your Back-side, which in the same Manner you may do with any Colour, your next Work is, to lay your Linen of a fair White, and your Drapery flat with the Colour you intend it. Then take another View of the Face, and mark well what Shadows are too light, or too deep, and endeavour to reduce each Shadow to its due Perfection: Then shadow the Entrance into the Ear, and draw the Lines of the Eyelid, the Deepness of the Eye-brows, and all the most eminent Notes and Marks in the Face, doing them with a very curious and sharp Pencil; and then heighten the Hair, deepening it as it appears in the Life, casting some loose Hairs over the Ground, which will look very pleasant, and make the Picture seem to stand at some Distance from the Curtain.

In the shadowing your Linen, which ought to be very curious, use Black, White, a little Yellow, and a small Quantity of Blue. The Black being deepened with Ivory-black; to which add a small Quantity of Lake, or Indigo. And thus much for the second Operation, from whence I proceed to the third and last.

The

The third Operation, &c.

In this, only observe to give strong Touches where you see Cause, or find any Defect, taking more perfect Observations for the Rounding of the Face, which at this Sitting is better done than before ; noting diligently, whatever may conduce to Likeness, which is the Principal in the Work ; as Scars, Moles, Cast with the Eyes, drawing the Mouth, &c.

In case of Ornaments, as Garments, &c. the Ground being laid with Bise, then the Deepning must be Lake and Indico ; the Lightning White, very fine, faint, and fair ; and in the extreme light Places, let what has been said of the Blue Drapery suffice, and may be understood of all other Colours ; and, for the greater Ornament, you may mix the Light with Gold, or Silver, &c.

If the Body is to be in Armour, lay liquid Silver for your Ground, and when it is well dried and burnished, shadow it with Silver, Umber, and Indico, and work the Shadow upon the Silver, as the Life directs, &c.

For Gold Armour lay liquid Gold for the Ground, and shadow it with *English* Oker, Lake, and a Mixture of Gold.

For Pearls, of that Colour your Ground must be Indico and White, and the Shadow Pink and Black.

For

For Diamonds, lay a Ground of liquid Silver, deepn'd with Ivory and Cherry-stone Black. And thus much for the Face, Body, &c. as to the laying in Water-colour, and the next that present themselves are Land-skips.

Directions for laying Landskips, &c.

In this Case, always begin with the Sun-Beams and Sky, the lightest Part first, and then the Yellow, which must be composed of Masticote and White ; the next your Blue Skies with Smalt only, leaving no Part of your Ground at first uncover'd ; but lay the Colours smooth all over, working the Sky downward toward the Horizon, still suffering it to grow faint, &c. as it draws nearer the Earth ; and work the Tops of Mountains, and other Objects very remote, so faint, that they may appear as lost in the Air. And as for your lowest and nearest Ground, it must be an Earth Colour of dark Brown, inclining a little to Yellowish and Green, as the Matter requires ; and the next a lighter Green ; and so successively, as they lose in their Distance, you must abate their Colour : Nor must you make any Thing you see at a great Distance, perfect, or absolute, what it really is ; because it is altogether Conjecture ; you cannot absolutely discern it, but express it in Colours weakly, and faintly as your Eye judges it may be. And ever observe in this Case,

Cale, to place the Light against the Dark, and so consequently, the contrary, which is an excellent Way to extend the Prospect far off ; yet do it so, as the Shadows may lose their Force, in their Proportion of Distance, by Degrees, as they remove from the Eye ; observing farther, that the strongest Shadow must ever be nearest. And thus much may suffice for Limning in Water-colours, which if duly observed and practised, will wonderfully help the Learner. And in this Manner you may paint upon Glass, by laying on the fairest Colours, if it appear through the Glass first ; but if otherwise, lay first a Ground, and especially upon Copper.

C H A P. X.

Directions for the most curious Painting or Limning in Oil, with the various Colours and Materials required on that Occasion, with their Manner of preparing and ordering. As also Instructions to paint to the Life, &c. Not only useful to the Gentry, but to those who intend it for their Profession.

AS this noble Science, in all Ages, has been held in much Esteem and Veneration among Men in all Ages, it is now more especially coveted to be known, and practised by either Sex ; wherefore, for the better

better Instruction, especially of the Learner, I have thought fit to lay down the following plain and easy Rules, which being well observed and practised, may, in Time, bring him to be a great Master in the Science. But first, of the Colours to be used on this Occasion, without knowing which, the rest may prove ineffectual.

The Blacks are Lamp-black, Sea-coal-black, Char-coal-black, Ivory-black, and Earth of *Cologn*. The White, White-lead only. The Greens, Verdigrease, Terra-vert, and Verditer. The Yellows are Pink, Masticote, Orpiment, Spruce Oker, *English* Oker. The Blues are Bise, Smalt, Indico, and Ultramarine. The Reds are Vermilion, Red Lead, Indian Red, Lake, and Ornotto. The Colours indifferent are Spanish Brown, burnt Spruce, and Umber.

These are the principal Colours to be laid in Oil, and must, for the greatest Part of them, be ground upon your flat Stone with a Muller, with Lin-feed Oil; though as for Ivory, Spruce, Oker, and Umber, they must be burnt before they are ground. And as for Masticote, Ultramarine, Verditer, Vermilion, Lamp-black, Smalt, and Orpiment, you may temper them upon your Pallat with Oil, saving yourself the labour of grinding, &c. And as for those that are to be burnt, you must perform it in a Crucible; and though Lin-feed Oil be common to all, yet,
when

when you are to lay Linen, with your white Lead you must mix Oil of Wall-nuts, by reason the other will in a short Time turn yellowish.

The next Thing, you are to take Care of, is to have good Pencils of all Sizes, a Pallet, or Board, to lay your Colours on, whilst you are using them, and an Eysil to lay your Cloth upon, or against, and a straining Frame, to which it must be nailed; and you must further have a Stay or Molestick, which is made of Brazil, or such Wood as will not easily bend, about a Yard long, at one End of which tie a Ball of Cotton in a Piece of Leather; so that holding it in your left Hand against the Work, you may support your right Arm with it, whilst you are working; and being thus furnished, you may proceed to the Work, &c. And first of the Complexion.

For a fair Complexion.

Take a small Quantity of White, and twice as much Vermillion and Lake; temper these with the Flat of a Knife's Blade upon your Pallet or Hand-board, and use it for the deepest Carnation of the Face, adding moreover to a small Part of it more white, and reserve that for a lighter Carnation. And yet another Part being reserved, add more White to it, till it come
to

to the lightest Colour in the Face : And then proceed to prepare the faint Shadows ; and in doing it.

Take Smalt, and mix it with a little White, which may conveniently serve for the Eyes ; then laying aside the greatest Quantity, add to the rest a little Pink, and these well tempered, will serve for the faint greenish Shadow in the Face ; then proceed to prepare your deep Shadows : And in Order to it, take Lake, Pink, and Ivory-black, a like Quantity of each, and temper them together. And if the Face of the Party, or the Figure you are to copy require redder Shadows, than what you have tempered, add more Lake, if yellower, more Pink, if bluer, or greyer, then add more Black.

Thus having prepared your Pallet with Colours suitable to a fair Face ; consider again, in Case the Complexion be more brown, or swarthy, you may temper the Colours, as before, putting moreover a little Quantity of burnt Oker amongst your Lake, Vermilion, and White, that it may look somewhat tawny amongst your heightened Colours : In this Case, temper a little Oker, so much only as will just turn it, and for your very deep, and very faint Shadows, you may use the same, as for the former Complexion.

For a tawny Complexion, use the same in the general as before, only let the Shadows

Shadows be prepared of burnt Oker, and Umber.

For an absolute black Complexion, your dark Shadow must be as the foregoing; but as for your Heightning, you must take burnt Oker, Lake, with Black and White, yet but a little of the latter must be put in at first, that you may the better work it up by Degrees: And note, that the single Colours laid at first upon your Pallet well tempered, according to the foregoing Directions, serve for Shadows for all Complexions.

C H A P. XI.

What Pencils are to be used in painting a Face, and how to dispose them. Directions to paint a Face in Oil Colour, and what Mixtures are requisite for Garments, &c.

YOUR Pencils, how small soever, ought to have a Stick about nine Inches long, cut or sharpened at the farthest End into a Point; and when you are to draw any Face, lay together two Ducks Quills Fitch-Pencils, two Goose Quill fitch'd, two pointed, and two bristled, the Pairs being exactly alike; and when you are to use them, having your Pallet in a Readiness upon your Thumb; take them in your right Hand, and put the

Ends

Ends of your Sticks into your Left; keeping when you work the hairy Ends, at a Distance lest the Colours intermix; then proceed to your Work, viz. your Cloth being ready primed, and strained upon your Frame, scrape it over with the Edge of a Knife, not very sharp, to take off the Knots, if any appear, and set your Frame and Cloth upon your Eysel a convenient Height, so that sitting upon a Stool level with the Party or Copy you draw, you may the better have the Picture equal, &c. placing it according to your Light, as I have directed in Water-linings; then with a Piece of Chalk draw the Proportion of the Face upon the Cloth, marking the Place for the Eye, Nose, Mouth, Ears, Hair, &c. Then take a Swans Quill pointed Pencil, and begin with some of the lightest Colours in the lightest Part of the Face (the Cloth before being primed, or ground-laid) as the heightening of the Forehead, Cheek-bone, Nose, &c. on the lightest Side; and when you have done that, then proceed to the mean Parts, viz. those not altogether so light, as the Cheek-bone of the fore-shortening, or dark Side, the Chin and upper Lip, and by Degrees come to the reddest Part of all.

Having thus far proceeded, lay the greenish faint Shadows in Places convenient, and where you see Cause, to moderate the harder Shadows; but have a special Regard not
to

to place the Green where the Red should be: All the faint, and light Beginnings being put in, take a Quill fitch'd, and a Goose-Quill pointed Pencil, and begin at the Eyes to Shadow with Lake, and trace out those Parts of the Face therewith that require it, as the Eyes, Nose, Mouth, the Combs of the Ears, &c. and do this before you lay on any Colour, lightly wiping it over with a linen Rag, to prevent the overcoming of other Colours.

Having now put in all the Colours, dark and light, take a large fitched Pencil, and soften the Colours: That is, go over the several Shadows with a clean, soft Pencil, which, by a gentle and dextrous handling, will force or drive the Colours into each other, so that they will represent the laying on at once, and not at several Times. This being done, begin again with your clean Pencils, of such bigness as the Work requires: Then, the Party sitting in the Posture as before, take a correct View, and see what Defects you find in the Work, and amend them; after that, proceed to heighten, or deepen your Shadows, as the Nature of the Piece requires; and if a Beard or Hair be required, take a Goose Quill bristle Pencil, and put in the Hair about the Face, and rub in the greater Hair with the greater Bristle, heightning it up with your Goose-quill Pencil, and your Work is done.

If

If Garments are required, called by Artists Drapery; for a Red Garment lay dead Colour with Vermilion, glaze it over with Lake, and heighten it with White. For Scarlet, Vermilion must be the lightest, deepened with Lake, or Indian Red. For a Crimson Velvet, lay burnt Oker, Vermilion, or Indian Red, glaze it with Lake, and touch it up with Vermilion. For a sad Red, heighten Indian Red with White, and let all your Deepnings be with Black, Pink, and Lake well tempered. For Green Garments, heighten Bise and Pink with Masticote, and deepen it with Indico and Pink. For Green Velvet, lay the dead Colour with White, and a little Lamp-black; glaze it with Verdigrase, deepen it with Indico and Pink, and heighten it with Pink and White. For Yellow, take yellow Oker, Masticote, and Umber; lay the dead Colour with Masticote and White, in the highest Places, and with White and Oker in the meanest, and with Umber in the darkest, glazing it when dry with Pink.

For Blue Garments, take Indico and White, laying first the White in its due Places; and then your mean Colour, *viz.* Indico and White well temper'd, in their due Places; then deepen it with Indico, and glaze it with Ultramarine when dry, &c.

For Purple Garments, take Oil Smalt tempered with Lake and White Lead, and heighten it with the latter. For

For Black Garments, let the dead Colour be Lamp-black, and a little Verdigrease; and when it is dry, go over it with Ivory-black; and having heighten'd it with White, go over it with Ivory-black, and Verdigrease.

For Orange-colour Garments, mix Red Lead and Lake, laying the lightest Parts with Red Lead and White; the mean Parts with only Red Lead, and the deeper with Lake,; and, if Need requires, you may heighten it with White.

For Cloth-colour'd Garments; for the Ground, take Umber and White, and for the deeper Shadows, Umber and Black; and for the Mean, Umber and Oker, and whiten it with Oker and White. Thus much may suffice for this Sort of Limning, and Painting.

C H A P. XII.

The curious and mysterious Art of Etching and engraving in Gold, Silver, Copper, Steel, &c. displayed, and made manifest in easy and plain Rules and Methods, by which an unexperienced Person may attain to the Knowledge thereof, and the expert be wonderfully improved, &c.

TO introduce this curious Art, I think it highly convenient to begin with Etching, the better to give a Light into what follows, &c. And first of the Ground.

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In

In this Case, procure three Parts of Virgins Wax, and one of Asphaltum, one Part of Mastick, and one Part of clarified Rosin ; put the Wax into a new glazed Pipkin or Pan, and let it boil over a gentle Fire ; then put the other Ingredients to it, which being melted, pour it out into fair cold Water, keeping back the Dregs ; and when it is cold, work it into a Ball ; tie it then in a Rag so close that no Dregs may come through, and use it upon your Copper, as you have occasion.

In preparing your Copper, observe that it be well polish'd, not lying higher in one Place than in another, nor no where uneven ; and if you see any Specks in it, coal it over with well burnt Char-coal and fair Water, and set it aslope to dry ; which done, scrape some very dry Chalk or Whitening upon it, and rub it over with a woollen Rag, not touching the Face of the Plate with your Finger till the Ground be laid, which must be done in this manner, *viz.*

Put lighted Small-coal into a Chafing-dish, and lay the Plate on the wrong Side over it, that a gentle Heat may come thro' ; then take your Ground in the Rag, and rub it gently up and down the Copper, till it come through the Covering, by reason of the Heat, ; and sufficiently cover the Plate, not too thick nor too thin ; and then, whilst it is warm, take a Duck's Feather, and smooth it exactly, but beware the Copper be not

too hot ; for if it smokes, the Moisture of the Ground is gone ; and then in etching, it will crack and fly ; and when it is according to your Mind, suffer the Plate to cool ; then grind a Piece of white Lead in Gum-water, not very stiff, and make the White of convenient Stiffness, to wash over the first Ground of the Plate, with a Brush dipped therein, till you perceive it every Way smooth, going over it with another Brush of soft Fur, and so let it dry.

The Ground thus laid, take your Draught after which you are to work, and scrape on the Back-side of it some red Chalk, moving it all over, and scrape over that some Small-coal, very fine, suffering it to mingle with the the Chalk ; and then with a Pencil, or Hand-brush, rub it up and down, till it be smooth and even ; then place your Design upon the Plate, and with a blunt Needle, or Steel point, draw over the Out-strokes ; and then you must have several Needles, according to the smallness, or largeness of your Strokes in the Copy, and with them in a tin Pencil, Frame, or Stick according as Bluntness, or Sharpness requires, take out all the black Strokes, pressing so hard, that the Needles may pass through the Ground, and make some small Impression on the Copper, ever observing when you lay by your Plate, to wrap it up in a Paper to prevent Scratches,

or the Air spoiling the Ground, wiping away, as you work, the Ground the Needles broke up with a light Pencil; not suffering the Ground to lie too long on the Plate before you finish; for the Air drawing out the Moisture of the Ground, the Etching will appear broad and deep, black and un-
 seemly; or when sometimes you suppose it eaten sufficiently, you will find it defective in many Places, and in frosty Weather you must wrap the Plate as well in a Blanket as in a Paper; for if the Frost takes the Copper, the Ground will start from it, and the Aqua-fortis will spread under it, and keep no certain Form.

Having observed these Directions, take green Wax, and melt it in a new Pan, or Pipkin, and with a Pencil cover the Edges of the Copper, and stick the Wax round about like a Wall, to keep the Aqua-fortis in; that done, and being firmly stuck on, take the third Part of an Ounce of Aqua-fortis, and break it with other Water of the same Kind, that has been once, or twice used; taking at least two Parts of the old, to one Part of new; and in Case you have no old Aqua-fortis, then instead of it, use strong white-wine Vinegar, as a Mixture; and for such Figures, or Things, as you would have lie fine and sweet, you must pour out your Aqua-fortis into some earthen Vessel, and then wash off what remains
 with

with fair Water, and suffer it to dry ; then melt Candle-grease, with a little Ground, and with a Pencil cover the Places you would have lie faint ; then pour on again your Aqua-fortis ; and so continue to do, as often as you conceive it convenient ; then melt off the Ground over a gentle Fire, and with a clean Rag wipe it off, and you will have the perfect Impression of the Copy on the Plate, which you may work off at the rowling Press ; and thus you may do upon any Metal the Water will take, &c.

From etching, I proceed to the Art of engraving, and he that would be expert herein, must have a Regard to true drawing ; wherefore, I would advise the unskilful to consider well what I have laid down of that Kind, and well, provide himself with Materials for the Performance of this curious Art.

In the first Place, be sure to choose a good Oil-stone, free from Pin-holes or flaws, not too hard nor too soft ; and therefore the better to furnish yourself aright, you must consult, in what the Stress of your Business will lie ; for if you intend Picture, or Letter-work, accounted more curious than Marks, or Arms used by Gold-smiths, and Pewterers, you must have your Gravers accordingly shaped, and tempered, Gravers are frequently crooked, the better to come at hollow Places, &c. but for Copper, or any Plate, that may be easily come at, the strait Gravers are ever

held the best ; and if you suspect their Goodness, try whether, or not, they are file Proof ; and if so, they will fit your Purpose ; though at first, by reason of their Temper, they may appear brittle, and sometimes break short, yet being ground out, they will grow better and better, and come in a little Time to an excellent Temper.

As for the Forms of Gravers, and their use, the square one makes a broad Shadow stroke, or hatch, and that which is in the Form of a Lozenge, a narrow deep one, the one being appropriated to large, and the other to fine Strokes ; yet if your Work be curious, a middle Size between these will the better accomodate you, which will render your Strokes, or Hatches more graceful, and yet carry with them sufficient Force and Vigour.

When you whet your Gravers, which is frequently required, pour a little fine olive Oil upon your Stone, and laying that Side, which you intend shall cut the Copper flat, upon it, whet it very flat and even, and to that Purpose carry your Hand very steady, continuing an equal Strength, and placing your Fore-finger firm upon the contrary Side, so that you may have more Power to guide it with Exactness ; then turn the unwhetted Side, and use it in the same Manner, that there may be a very sharp Edge ;

Edge; then turning uppermost that Edge, which in the former Manner you have whetted, setting the End of your Graver obliquely upon the Stone, bear your Hand with an exact Evenness, that it may prove very flat, and sloping in the Form of a Lozenge; and in this, you must take great Care; for if your Graver be not well and rightly whetted, you can never grave well.

Observe, when you have a Graver whose Handle is round, or Knob oval, if you would prevent it from running into the Copper, or other Metal you grave, further than is convenient; then must you cut off that Part of the Knob, which lies in a Line with the Point of the Graver, and make it as level as you can with the Point; nor then will it hinder your Hand from carrying an even Stroke, which otherwise it will do, especially in working a great Plate, by bearing too much upon the Copper, and in holding it, place the Knob-side, or that Part of the Ball not cut off, in the Hollow of your Hand, extending your Fore-finger towards the Point, and laying it opposite to the Edge that is to cut, and place your other Fingers on the one Side of the Handle, and your Thumb on the other Side of the Graver, in such a Manner, as with ease you may guide it flat and parallel with the Plate, being ever very careful, that your Fingers do not interpose between the Plate and Graver,

ver, lest it hinder you in carrying it level with the Plate, hindering you from making your Strokes with Freedom and Neatness.

Further, to fix you in this Affair, you must have a strong round Cushion of Leather filled with fine Sand, about half a Foot over, and four Inches in the Diameter, rising a little in the middle, and sloping towards the Brims, but not much, and this must be to lay your Plate on, that you may turn it at Leisure; and if you are to make streight Stroaks, hold your Graver in a direct Line: Or in Case you would have your Strokes broader and deeper in one Place than in another, you must lay more or less Stress, as you see Occasion, observing in all streight Strokes to hold your Plate steady, and firm upon the Cushion, and the Table, or Bank on which it stands, well fixed: But in crooked, and winding Strokes, you must hold your Hand, and Graver steadfast, and only turn your Plate, or otherways you cannot command your Hand to that Neatness, as in many Cases is required; observing at the same Time, for greater Steadiness, to keep your Elbow fixed upon the Table, and your Eye on the Plate, scraping your Work, as you go with the Edge of a Burnisher to take off the Roughness; yet be careful that you make no Scratches; and the better to see what you have done, rub the Place over with a Piece of black Leather dipped in Oil,

Oil ; and then if any Scratches appear, with your Burnisher rub them out ; and if any Strokes be too hard, in the same manner you may make them fainter. But if your Graver should happen to be very hard, which by its excessive Brittleness in often breaking is known, lay it upon a burning Char-coal till it grows yellow, and then dip it in Water, and it will, by often so doing, render it of a better Temper ; but if it be blunt in a short time cutting, then it is too soft, and you must heat it in the Fire, and dip it in Lime-juice or Vinegar. Thus much for the Management of the Tools, &c. the which, by a little Practice, will soon grow natural.

Another material Thing in this Art is to be consider'd ; which is, to take the Impression you are to cut, or grave upon your Plate ; and in this case, heat your Plate over a Fire of Small-coal, and having a Piece of fine Bees-wax tied up in a fine Rag, worked like a Ball, that it may fit close, wipe the Plate over with it, when it is hot enough, very lightly, till you perceive it is covered with Wax, very thin and even, laying it with a Feather ; in which, at first, you may find some Difficulty, but Use will render it easy. And in this case, if you are to imitate an exact Copy, it must be so order'd, that it may stand the contrary Way on the Plate ; and therefore your best Way will

be to trace it over with a Black-lead Pencil, especially in case of a very old Picture ; which being done, take a Piece of polish'd Ivory, and placing your Picture exactly on your Plate, the Print Side downward, rub it lightly, and you will perceive the exact Proportion of the Print remaining upon the Wax or the Plate ; then take a Steel Point, and go over each particular Limb, &c. especially in the Out-strokes, and there will be but little Difficulty to mark the Shadows which lie before you, as you engrave the Work, and the readier it will be if you mark how far your Shadows should be dark, and how far light, with your Black-lead, before you rub it off

The carrying of the Hand in this kind will at first seem difficult, as to the Depth of your Strokes ; but in general, observe ever to carry your Hand with such a Slight, that you may end with the same Faintness or Darknes you begun. And if one Part require more Depth and Blackness than another, you must do that by degrees : and that you may the more expertly do it, observe that your Strokes be not too close, nor too wide. And therefore to bring your Hand in the better, practise at first by such Prints as are but loosely shadowed, lest by attempting to imitate those more dark and close, you happen to be puzzled where to begin, and where to end : But Practice will inform you.

As

As for Letters in case of Copies; the Letters must be gone over with ungummed Ink, or with black Lead, and laid on the Plate when waxed as the former, unless you are so dextrous at Writing that you can draw them by Hand, or with a Steel Point on the Plate, &c.

But if a Map, or other Mathematical Instrument be required, every Circle, or Perpendicular, must be drawn over as before, or you cannot exactly imitate. But in case of a Face, or Coat of Arms, or Instruments not to be printed, then you may black over the Back-side, as in Etching; but you must use for Engraving a Wax Ground only.

C H A P. XIII.

The Mystery of cutting in Wood, laying Gold or Silver, solid or liquid, preparing Colours for the painting of Pictures or Prints, the way of refreshing old Paintings or Pictures; colouring Maps, Buildings, Landskips, and many other curious Things, &c.

For cutting in Wood, in relation to Pictures, or the like.

YOU must prepare your Wood in the manner of a Plate, though an Inch thick, or according as the Design requires, either

either Box or Pear-tree, rendring it by plaining as smooth and level as a Piece of Paper; which done, having a Draught of your Design, you must rub the Wood gently over with a Ground of Paste made of the finest Flower; then fix your Draught or Copy upon it, and suffering it to dry, rub the Back-side of the Paper, which must be uppermost, with your wet Finger, till you crumble it off so thin, that the Print plainly appears upon the Wood, as if it had been painted, or drawn thereon with a Pen or Pencil.

Having thus prepared your Wood, if it be small, fasten it up with Coins, that it move not, unless there be Occasion, or as the Strokes require; and then having a fine small Knife, in the nature of a Pen-knife, but much less and thinner, especially for the fine Strokes, cut out all the white Strokes and Ground, and suffer the black ones to stand, sharpening the fine Strokes, and bringing them to an Edge, that they may not print black or dull; and, above all, be sure to do it with so light and curious a Hand, that you break none of them: for if so, you much deface and injure the Work, they not being to be repaired. And farther, observe to leave a good Foundation to the Strokes, though never so fine at the Top, lest by the Force of the Press they break in working.

You

You may have your Pattern, or Device, if it be new, drawn upon the Wood with Black or Red Lead, though the former Way is the securest from being rubbed out, or injured, &c.

An easy and curious Method to write or gild with Gold and Silver, &c.

If you would have fair Letters appear in Gold or Silver, take Gum-Ammoniac, and grind it with a little Juice of Garlick, and put thereto a few Drops of the weak Water of Gum-arabic, and make it to the thickness of Ink, that you may conveniently write with it; then write or draw what you think convenient, and suffer it to dry a little, but not too much, lest it take not the Gold or Silver; nor too little, lest it drown them. Then lay your Gold or Silver in Leaf upon a Leather Cushion, being a Piece of Calf-skin stuffed, with the rough Side outwards; and so with a sharp Knife cut it into what Proportion you will, suitable to what you have written; and taking it up with a loose Piece of Cotton-wool, on which you have breathed, cover the Place intended with it, pressing it down hard, and where the Gum-water is, it will take it; then brush away, with other Cotton, what it has not taken, and being dry, burnish it with a Piece of polish'd Ivory, and it will appear very bright.

To write or gild with liquid Gold or Silver, &c.

Take Shell-Gold, which is made of the ragged Edges, or Cuttings of Leaf-Gold: and when you design to use it, put in a little fair Water, tempering it with a clean Pencil, and lay it on with a Pen or Pencil in what Form you please, either by Way of Writing or Gilding; and when it is dry, rub it over with a Dog's, Calf's, or Horse's Fore-tooth, and it will be very shining and pleasant. And of this, as of the former, you may lay on more or less, either for the gilding Picture-Frames, Coaches, Rooms, or the like. As for Lacquering, it only consists of carrying a Pencil dipped in rectified Spirits over Leaf-Silver, which changes it to a gold Colour.

How to prepare Colours to colour printed Pictures, and thereby render them beautiful.

For a curious Violet colour, take Turnsole, being a Dye infused into a Piece of a Linen Rag; heat it in Vinegar, and it will give you the Colour desired. After which, dissolve in it some Gum-arabick, and use it as you see occasion.

For a curious Yellow, take Gum-boge, and dissolve it in fair Spring-water over a gentle Fire.

To

To make a transparent Red, take Brazil, grind it, and heat it over a Fire with Small-beer and Vinegar, put in a little Powder of Alum and Gum-arabick, and suffer it to boil till it taste strong, &c.

For a transparent Purple-colour, grind Log-wood, and boil it in all respects as the former.

For a curious blue, take fine Litmos, and cut it into small Pieces ; lay it for the space of twenty four Hours in a weak Lake Gum-water, to make which you have been before directed, and it will answer your Expectations.

To make a curious Green, take the Juice of Rue, and a little Verdigrease.

For a light Green, take Sap-green, Flower of Biss, or tawny Green, and steep them in fair Water.

To shadow Greens, steep Indico and yellow Berries.

To shadow Blues, take Litmos and Indico, steeping them in the Lees of Soap-ashes, and use them with Gum-water.

To make a good Brown, take Ceruss, Red Lead, Pink, and English Oker, mixing them with Gum-water.

For an Orange Colour, take Red Lead and yellow Berries, and mix them with Gum-water.

For a curious Flesh-colour, take White Lead, Red Lead, and Lake, with Gum-water. To

To make a Colour for precious Stones, take Verdigrease and Varnish for an Emerald, Florence Lake for a Ruby, and Ultramarine for Sapphire.

How to colour Maps, and what is to be observed therein.

In this Case, as well as in other printed Pictures, it is only to set them out in their proper Colours, which you must accordingly consider, as the Nature of the Thing requires, it being impossible to give particular Directions: However, observe that Water must be a faint Blue, Sky somewhat deeper, Trees Green; Houses in Maps usually Red, and Ways Yellow and Green. And to these, and the rest, suit any Water-Colour you think suitable mentioned in this Book.

A very proper Colouring for Landskips, and Building at large.

In Landskips, for the saddest Hills, use burnt Umber; for the lightest, put some Yellow to it: And for other Hills, lay Copper-Green thicken'd on the Fire, or in the Sun; and for those farther off, mix with it some yellow Berries, and let the fourth Part be done with green Verditer, and the furthest and faintest Places, with blue Bise; for the lightest Places, use White, and shadow it with Blue. As for the High-ways, do them
with

with White, and Red Lead, using for Variety, Yellow Oker, shadowing it with burnt Umber : And it may likewise be used for sandy Rocks and Hills ; and as for other Rocks, you may lay them with several Colours ; but at a distance they must appear Blue, as in the Air. As for the Water, do it with black Verditer and White, shadowed with Green ; and with blue Verditer when the Banks cast a green Shadow upon the Water ; but when the Water is dark in the Shadows, shadow it with Indico, blue Verditer, and Green, &c.

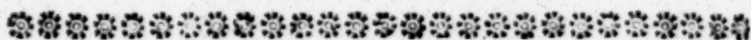
How to colour Building, &c.

In colouring Buildings great Variety must be used, the better to set them off ; yet not so as they may appear extravagantly adorned, or contrary to the Use of this Kind . But for Walls and Conduits, use a Mixture of White and Black ; as likewise for other Materials : But if a Brick House, use Red-Lead and White ; and where the Houses stand thick together, there use sundry Colours suitable to the Occasion.

To clean old Pictures.

Take Wood-Ashes, the whitest that may be had, sift them through a fine Lawn Sieve, and with a Sponge and fair Water wash the Picture gently over, not rubbing it hard, lest you impair the Shadows ; which being
done,

done, and the Picture dry, take distilled Varnish, and rub it thin and gently over, and it will create a lasting freshness : Or for want of this, you may do it with the Whites of Eggs well beaten, or Gum-water. But note, the Pictures to be thus used, must be such as are laid in Water-colour Oil.



C H A P. XIV.

Instructions for restoring Taipstry Hangings, Carpets, Turkey Chairs, that are faded, or decayed, to their lively Colour ; to prepare Flock Cloth for Hangings ; Spanish white, Size, Alum-water, and Gum-arabick-water, how to make them ; as also to thicken Cloth for Screens.

To refresh Hangings, or Tapistry Carpets, or Chairs.

BEAT the Dust out of them in a dry Day as clean as you can, then rub them over well with a dry Brush, and make a good Lather of Castile, or Cake-Sope, and rub them well over with a hard Brush ; then take fair Water, and with it wash off the Froth, and make a Water with Alum, and wash them over with it, and you will

will find, when dry, most of the Colours restored in a short Time; and those that are yet too faint, you must touch up with a Pencil dipped in suitable Colours; and indeed you may run over the whole Piece in the same Manner, with water Colours mixed with weak Gum-water, and it will cause it, if well done, to look at a Distance like new.

To make Flock Cloth Hangings, &c.

To do this, take a coarse Canvas, spread it even upon a Floor or Table; then take Flocks, or Shreads of Woollen, grind them as small as Dust, and having sized over your Cloth with a good strong Size, sift the Flocks on while it is wet through a very fine Sieve, and having done it even in all Places, run a Rowler of Wood, or Iron over the Piece to press them down close, and so suffer them to dry in the Shade, lest the Sun or Fire parch and make them crack, and when dry, brush them lightly over with Alum-water; then draw your Design with black Lead, red Lead, Char-coal black, or any other Colour you fancy, and it will at a Distance look like Tapestry, and be very lasting in a Room, where no great Fires are made.

How to thicken Linen Cloth for Screens, Bedsteads, and the like.

Grind Whiting with Size, and to prevent its Cracking, add a little Honey to it; then
take

take a soft and smooth brush, and lay it upon the Cloth and so do two, or three Times, suffering it the mean while to dry between layings on, and for the last laying, smooth it over with *Spanish* white laid with Lin-seed Oil, the Oil being first heated, and mixed with a small Quantity of the Litharge of Gold, the better to endure the Weather, and it will be lasting.

How to make Spanish White.

Take fine Chalk, with a tenth Part of Alum, grind them with fair Water till very soft; and then bring them to a thickness, and make them up into Balls, lay them to dry leisurely; then heat them well in the Fire, and use them.

To make a good Size useful upon sundry Occasions, &c.

Take Glue a Pound, steep it in four Gallons of Water, till it be dissolved; then take a Pound of the Shreds or Cuttings of Gloves, or other soft Leather, and boil them in the Water, wherein the Glue has been dissolved, over a gentle Fire, till it feel very clammy between your Fingers; and when that is done, strain the liquid Part through a Sieve, and keep it for Use.

To make Alum-water the best Way.

Take a Pound of Alum, bruise it, and put it into two Gallons of Water, adding a
small

small Piece of Gum-arabick; and having scummed it after a gentle Heat from the Froth, strain the Water, and keep it for Use; and especially, to wash over printed Pictures slightly before you paint, or colour them, by which Means, they being afterward suffered to dry, the Colour will be prevented from sinking or soaking in.

To make Gum-arabick Water for all Occasions.

Take of the transparent or white Gum, two Ounces, half an Ounce of Alum, and two Quarts of Spring-water, dissolve the former in the latter over a gentle Fire, scum it, and take away the Dross; and so use it with Colours, or in making Ink, or the like; and if you perceive it too strong, you must put more Water; but if too weak, then more Gum, taking out the Dross as before.

Thus much may suffice for the first Part of this Book; which I hope will prove so useful to the Reader and Practitioner, that he will never have cause to repent of, or repine at the Cost and Labour so necessary a Treatise, fill'd with so much Variety, puts him to.

The End of the First Part.



ART'S TREASURY, &c.

PART II.

CHAP. I.

Metals, and Minerals, their Quality and Generation; from what they proceed, and how produc'd: The Art of transmuting and making artificial Metals or Minerals, with other material Matters.



IN Case of Minerals, and all Things inanimate, concentr'd or contain'd in the Bowels of the Earth, it is convenient to reduce them to four Kinds, viz. Metals, Stones, Earth, or Juices, Nature producing them with Mixture, and Participation of each other; and here by Earth, I mean the simple Element only, of which, as the Philosophers affirm, all sublunary Bodies are compounded: And though the Earth, according to the Situations of Countries, and Differences of Climes, varies in Scent, Colour and Taste; yet that proceeds

proceeds from a Mixture of some other Part, or Effect of the former; the pure elementary Earth being in all Places one and the same; in which, and by the Operation of Heat and Moisture, the others are generated: and as there are more or less of these, the Metals are finer or coarser. But to come nearer to our Purpose.

Gold is found in Grains, or Sand; and Silver in Veins, and sometimes twisted, and wreathed like the Branches of a Vine; and at other Times these Metals are found in Stones, with whose Hardness, they have incorporated themselves, and being broken, are with fining Materials extracted. As for Gold, it is the most perfect of all inanimate Bodies, and has its Generation, as I have said, from Heat, and Moisture in the Original; but of Parts so well contracted, and compacted by Connection, that it is in a Manner incorruptible, it being beyond the Power of any Element to prejudice or destroy it; for the Fire of the most subtle, and piercing Quality, consuming all other Metals by long Application, renders Gold more pure, nor can the Air, Water, or Earth diminish its Lustre, so that it cannot recover it again; by which Means, it has deserved the Estimation the World affords it; and is so ductil, that being expanded, an Ounce of pure Gold will cover a Plate of twenty or thirty Feet square.

Silver,

Silver as is hinted, carries a fineness next to Gold, wanting little more than the Colour, to be brought to its perfection ; wherefore those that strongly inveigh against the transmutation of Metals, have been convinced, that there is a possibility to turn Silver into Gold, by reason Fire and artificial Concoctions may supply the Defect, of which there have been many Experiments ; and from the even mixture, good temperature, and fineness of its Parts, it is not only ductil and malleable, but endures the Fire with little waste ; and, admirable it is, that an Ounce of fine Silver may be drawn out into a thousand four hundred Yards, and that too, for the most Part without breaking ; and thus extended may be gilt with six grains of Gold.

Copper is a metal, to the composition whereof, a great quantity of Sulphur is required, and from a distempered heat in the Mixture, the Fiery heat proceeds, and being over burnt in its Composition, it is therefore less subject to Corruption, and is used about Engines of long continuance, because it rusteth not, and is found in Mineral Stones of divers Colours, though the most effectual Colour is green, or blue ; and so often is it ingendred near Gold and Silver, that many Times following a Vein of it, much pure Gold, and oftener Silver, has been found ; and such Veins of Copper, as make a superficial

facial thew, are upon being dug, richer the deeper you go, which is occasioned by the Moisture; and many times pure Silver is at the bottom, &c.

Iron, though very common, which lessens its esteem, may be termed the Wall, and Bulwark of Kingdoms, the Safe-guard of private Persons and the Handicraft Tradesman's only *unum necessarium*; for without it few Employments can subsist. Its extraordinary hardness proceeds from over much Earthy-parts, or fixed Sulphur in its Composition; not but it has a proportion of Quicksilver in it, so that it will not without a very violent heat be melted, nor will it break, but expand by force of Hammers, or other Violence, and receive an impression by dilating it self; and although it is cold and dry, yet by reason it is more porous than other Metals, it is of less Weight; and consequently subject to be consumed by Rust.

Lead is frequently found in the Silver Mines, and indeed as often by it self; nor scarcely is there any Ore, but some quantity of Lead is found in its Mixture, as being by the Abundance of its humidity serviceable to it; and especially in the melting of Gold and Silver; which cannot conveniently be done without the help of Lead; for in this Case, by reason of its Moisture, it does easily evaporate, carrying with it

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whatever is not Gold or Silver, and in its Weight comes nearest to the former, *viz.* Gold, and in Colour to Silver, not being subject to Corruption, as Iron.

Tin is generated by a grosser Sort of indigested Quick-silver, though much finer than Lead, by which Means it becomes more white and hard, though from ill Mixture of its Substance, it is accounted the Bane of Metals, making them brittle by never so small a Mixture; and the Reason is, that by its Incorporation, it hinders the Ductility, and disorders its former equal Temperature; except in Lead, with which it better agrees, by reason of the moisture and softness; so that being incorporated they become ductil and malleable.

Quick-silver is of a liquid penetrating Substance, and greatly in use; especially in refining Metals, agreeing with any Sort, abounding with much Humidity, which gives it Brightness and Weight, and is held the principal of the Generation of Metals; nay its very Substance is transmutable into Metals, enduring as well, as those that come out of the Mines, the Trial of the Fire, and Hammer.

There are sundry Metals, called artificial Metals, made by Mixture of Minerals. As from a Mixture of Tin and Copper, Brass or Bell-metal is made; likewise a Metal serving for Pieces of Ordnance, and sundry other Uses: And in this Case, a Pound of
Tin

Tin must be put from four to eight Pound of Copper, according as you expect it more brittle or tough.

Latten is made of Plates of Copper, put into Crucibles, and cover'd with Powder of Jalamina, or a kind of half Mineral Sulphur strewed over it, and upon that, the Powder of beaten Glass; to which, Fire being put, and the Steam or greatest Force of it kept in, it alters the Colour of the Copper to a brassy Quality, and adds in Weight eight Pound to the Hundred.

Pewter is a mixture of Lead and Tin, and has sometimes in it, for the better hardening and keeping it together, a small Quantity of Brass or Copper.

And thus much for the Generation and Description of Metals, which the Earth so abundantly produces for the Use and Benefit of Mankind; from whence I proceed to the hardening of Metals for Handy-crafts, and many other Uses.

C H A P. II.

Instructions for softening and hardening Metals and Minerals, suitable to many Occasions, as used in Tools, Engraving, &c. The Art of soldering and gilding, burnishing, and the like, upon Metals, &c.

To soften Steel or Crystal.

TAKE of unslaked Lime a Pound, and as much Soap-boiler's Ashes, and hav-

ing made a Lee therewith, put your Steel or Crystal into it for the space of twenty-four Hours, and it will easily be cut, or other ways ordered, &c.

To soften brittle and stubborn Iron.

Take the Juice of Colt's-foot and Hemlock, and when your Iron is hot, steep it therein, and it will beome ductile ; or you may do it by often quenching it in Lin-seed Oil.

How to make a Powder to soften Metals.

Take your Metal and heat it well ; then take ground or beaten Glass, common Salt and Brimstone, and sprinkle them upon your Metal whilst it is red hot, and afterward burn them off in the Fire.

To make Iron or Steel as soft as Copper, the better to ingrave upon, &c.

Take Chalk and Alum, bruise them well together, and being wet with the Juice of an Onion, daub it over your Metal a Finger thick, and thrust it into the Fire, suffering it to burn till it become clear, and it will answer your Expectation.

To make Iron or Steel so soft that you may twist it at pleasure.

Take the Gall of an Ox, mix it with Oil of Turpentine and Urine ; heat your Metal, and strow upon it Powder of Vitriol ; then wash

wash it over with the Materials before-mention'd, till it comes to be somewhat cool, and it will be very flexible.

Instructions to harden soft Iron.

Take the Decoction of Vervain, House-Leek Juice, the Juice of Hore-hound, Rardish or Rue, dissolve in them some Alum-powder, and the Business will be effected: i. if you rub the Metal when hot with the liquid Part.

To harden all manner of Iron Tools or Instruments.

Take the Leaves or Juice of Cinqfoil, or five-leaved Grass, the Juice of a Lemon or White-wine Vinegar, and dip the Pieces of Metal or Tools in it, when hot: Do this often, and you will find the Advantage.

To make Iron as hard as Steel.

Take the Juice of Roman Nigrel, and Mouse-ear, Herbs so called, and strike over the Metal being hot; and by this means Tools may be made of it that will cut Iron.

To harden Metal so that it shall not crack or flaw, &c.

Take Oil of Spike and Mutton-suet, and daub over the Metal hot; then plunge it suddenly in cold Water, and the Business will be effected.

*To harden Augres, Files, Chizels, Matlocks,
&c. for Use.*

Take the Juice of Radish, or Cole-worts, mix it with Lee made of Soap-ashes, heat it over the Fire, and when your Tools are well heated, or red-hot in the Fire, quench them in it.

*To make Tools so hard that they will cut
Iron, Copper, &c.*

Take Salt-petre and Copperas, strew them in Powder upon the Tools when red-hot; and then quench them in the distilled Water of Shell-snails, and your Expectation will be answered.

*To colour or varnish Tin, Copper, or the like
Metals.*

Take half a Pint of Lin-seed Oil, warm it over the Fire and scum it; then put therein bruised Amber and Liver Aloes, of each a quarter of an Ounce, and suffer them to boil up to the thickness of an Ointment; after that, set them in a close earthen Vessel under Ground for the space of four Days; and when you use it, strike your Metal over with a Brush or Pencil, it being at the same time hot over a Pan of Small coal, and it will be of a curious Amber or golden Colour.



The

The manner of gilding upon Metals, viz.

Take Wine-stone, Verdigrease, and Sal-armoniac, seeth them in White-wine with some common Salt, strike the Metal over in different warm with the liquid Part, and suffering it to dry a little, take Water or Leaf-Gold, and lay it on, which by virtue of the washing will stick fast; so that with a Burnisher of Ivory you may finish it in its proper Lustre.

How to make a Water for gilding Metals.

Take three Pints of Spring-water, two Pound of Roch-Alum, an Ounce of Roman Vitriol, and as much Verdigrease and Orpiment, boil and scum them, and then put in Water of Tartar and Bay-salt, of each two Ounces; and when the Ingredients are well dissolved, and come to a thickness, strike your Metal over therewith, dry it against the Fire, and burnish it.

How to gild Iron or Steel with Quicksilver, or Gold Foil.

Take Vitriol and Sal-armoniac of each an Ounce, of Alum two Ounces, beat them fine, and boil them to a thickness in fair Water; add a Dram of Verdigrease, and half an Ounce of Sublimate, strike your Metal over with it; then having mixed your Gold and Silver together, lay them on with

a Leather Spatula as smooth and even as may be ; then suffer the Varnish to take it, and burnish it over.

To make Iron, or the like a curious Blue, or Steel-colour.

Burnish your Metal to a Brightness, and take Cows-Hoofs, burn them, and hold the Metal over the Smoke of it, and it will answer the End designed, &c.

To make Copper, &c. a Silver Colour.

Take Bay-salt, Alum and Wine-stone, grind them to Powder, adding in your grinding some Leaves of Silver, and put them into an earthen Pot close stopp'd with your Copper amongst it ; then taking it out, rub it over with some of the Powder, and burnish it.

A very good Way to burnish Iron or other Metals.

Take of Liver and Succotrine Aloes, and Amber, each an Ounce, make them into Powder, and place them over a gentle Fire in a well glazed Pot ; when you perceive it melted, put to it a quantity of scalding Oil, and when the Mixture is well made, let it cool ; your Metal being glowing hot, lay a little Piece upon it, and rub it over.

To

To make a good Solder for Iron, or any hard Metal, being cold.

Take of Sal-Armoniack two Ounces, two Ounces of common Salt, the like Quantity of Wine-stone in Powder, six Ounces of thick ground Glafs, two Ounces of Clock-spike, bruise and mingle them well together; put them into a linen Cloth, and let the Cloth be cover'd a Finger thick with soft Clay, encompassing it on the out-side, and put them into a well glazed earthen Pot, with a Lid or Cover, and put that into another larger Pot of Earth well cover'd, and let them stand over a gentle Fire, that the Heat may encrease by degrees, till all be red-hot and run; then suffer it to cool, and break it small, and grind it to Powder: When you use it for soldering, make your Iron, &c. fast, and the Joints being close laid, lay a Paper under them, and upon it some of the Powder, as also between the Joints; then wrap it round with Clay, except the upper-part, which you must leave open to solder at: Then take the Powder of Burras, put it into Wine or Aqua-vitæ, and suffer it to dissolve; then dipping a Feather therein, strike the upper-part of the Joints over with it, and it will begin to smoke and hiss; the which ended, you may uncase it, and find it perfectly soldered.

A Way to solder warm, or rather hot on Iron, Steel, &c.

Take Gum-water, beat it up with green Herbs of any kind, till it become a Paste, or of that thickness, and strike it on your Metal ; or lay it on the Joint, rubbing Soap over, then heat it, and it will prove a good Cement, &c.

To solder on Copper, &c.

Take of Copperas an Ounce, half an Ounce of Orpiment, or White Arsenick, dividing it into two Parts ; and then make your Copperas run with Fire ; then add one Part of the Arsenick, or Orpiment, and after you have spread it thin on a fine Stone, add the other Part ; then beat it into Powder, and use it as the Solder for Iron, &c.

To solder Latten, a Metal, or mixture of Metals so called.

Take a File, and make the Parts to be joined very smooth ; then put them together, and being hot, scrape your powder of Burras, and keep it close till cool, and the Joints will be fastned or fixed.

To varnish like Gold on Tin, Silver, or Copper, &c.

Take an earthen Pot well glazed, with a close Lid to shut in, and put into it six Ounces or half a Pint of Lin-seed Oil, an Ounce

Ounce of Liver Aloes, and the same quantity of Mastick ; make them into a fine Powder, and put them into the Oil, and cover the former Pot with a bigger ; both Covers having a small Hole in the Top, the better to stir the Matetials ; and having closed the outward Pot about with Clay, let it stand over the Fire till it boils up to the Hole, then cool it ; and when you would use it, polish your Metal, and strike this over it, being indifferently warm : Do this twice, suffering it to dry between either Time, and the Business will be effected.

A short and easy Way to lay Gold on Iron.

Take liquid Varnish one Pound, Oil of Lin-seed and Turpentine each an Ounce, mix them well together over a gentle Fire, and lay them as a Ground whereon to gild with Leaf-Gold, &c. laying the Varnish very thin, and suffering it to dry.

Another easy Way to gild on Metal, &c.

Take of Gum-arabick and Bole-armeny each an Ounce, put them into an earthen Pot with a good close Cover, set it over a gentle Fire ; and when they are warm put in two Ounces of Lin-seed Oil ; stir it till it comes to a Varnish thickness, then lay it for a Ground as the former, and the Gold, &c. upon it, observing for the better Splendor, when it is dry to polish it.

C H A P. III.

Valuable Metals, their Fineness to be known by Essay of Coins, and how they are to be known in their true Value; and what is to be observed in preventing your taking false Monies.

HAVING briefly run over several Things relating to Metals and Minerals, I now proceed to come somewhat nearer their true Value, as by the Rules of Art they are laid down by curious Inquirers into those Affairs, &c. especially as to what relates to Metals used in Vessels of Value, and current in Coins, &c. the Principal, I take to be Gold and Silver; the rest being vulgarly known, and therefore not requisite to be mentioned in this Place.

As for the Weight used for these fine Metals, it is that of *Troy*, consisting of twelve Ounces, and the Ounce of a hundred and fifty Carrats, and may again for the deciding of lesser Values be divided into four Hundred and eighty Grains; as for the Pound *Troy* Weight of fine, it is worth thirty six Pounds; and so lessens in Proportion of Allay, in this Manner, viz. an Ounce of fine Gold is valued at three Pounds; and that of thirty three Keys fine, at two Pounds seventeen Shillings and Six-pence; and so lessening, viz. twenty two Keys, at two Pound

Pound fifteen Shillings ; twenty-one Keys, at two Pound twelve Shillings and Six-pence ; at twenty Keys, two Pound ten Shillings, loosing two Shillings and six Pence *per* Ounce, as a Key, or Carrat is wanting in the Fineness of twenty-four.

In this Case, to know the Fineness or Defect, it must to prevent Fraud be found out by the Allay, which upon the Touch-stone may be done by Way of Essay in this Manner, *viz.* take Needles of Gold and Silver, and copper Allay, suitable to the several Allays, let there be four Sorts, *viz.* the first to be of fine Gold and Silver : The second of Gold, and Copper. The third of Gold, Silver and Copper. And the fourth of Silver and Copper only ; the first for the Trial of Gold ; and the latter for the Trial of Silver, making of these Mixtures twenty-four Needles of different Fineness. As the first of fine Gold of twenty four Carrats without Allay. The second twenty-three Carrats of fine Gold, and one of Silver. The third twenty-two Carrats of Gold, and two of Silver ; and so proceed to one Carrat worse, till there remains but one Carrat of the fine Gold in Mixture with the other Metals specified, *&c. viz.* twenty three Carrats of Silver. And by the same Rule proceed to the Gold and Copper, and Silver and Copper, marking each Needle for the better Distinction upon Occasion of what Fineness

Fineness it is. And by this Way, you may be satisfied of the Fineness of any Ingot, or Piece of Gold or Silver in Coin or other-ways, by comparing them on your Touch-stone with the Needle, whose Allay you already know, or trying them, till they become equal or alike, which when whetted will plainly appear. As for the Value of Silver, that which is fine is accounted five Shillings and Two-pence of our Money the Ounce, though there is some that will fall out in Fineness, to be worth five and eight Pence. But these Essays not being to be made by every Person who receives Money, I shall by other Ways instruct them how they may detect counterfeit Coins.

Few that have the handling of Money are ignorant, that Coins of all Sorts have been counterfeit, some by imbasing in Mixture, others by corrupt Metals, and others by Way of plating; and to know these; in Case of Guineas or broad Gold, First, weigh them, and try them by Essay as aforesaid; and then if you further suspect them, try them by Fire, or by Aqua-fortis; and if they be of base Metal, or corrupted, they will soon grow dim, and their Lustre in a small Time more and more impair; but if you suspect them plated, especially Guineas, throw them indifferent hard on the Edge, and the Embossment will open, and you may discover the Shell to rise. In Case
of

of gilded Shillings, though they have the Scepters as Guineas, which some Persons have had the Art to place there with graving Tools, yet your best Way is to try them, by racing with a Penknife's Point in any convenient Place ; and although they are double gilt the Silver will appear.

The counterfeit Mill'd is washed over or plated ; and to discover this, you will find the Letters imperfect, or perhaps none upon the Edges of Crowns or Half-crowns : The Sound likewise will be flat and dull, and the Metal on the outside may be easily raised to discover the Defect.

As for old Money, the worst Size is the Half-Crowns made with Pieces of Copper plated over ; and these you may know by their rising in the middle, falling hollow, and being imperfect in the Stamp ; or better by raising the thin Plate on the Edge. And as for smaller Money, mostly mixed with Silver, your Touch-stone is the best Rule.



C H A P. IV.

Instructions for making Black, Red, White, Green Inks, &c. for many Uses, as well solid as liquid, with that of the late Invention in Powder. Directions for mysterious Writing, and other Things, &c.

To make the best common or Black Ink.

TAKE a Gallon of Rain or clear Spring-water, and put twelve Ounces of Nut-galls bruised, or broken into it, Gum-arabick and Copperas of each two Ounces, suffer it, with once a Day stirring, to stand for the space of twelve Days in a warm Place ; and so use it as you have occasion And in this manner you may make a greater or lesser Quantity. But if you want Ink of this kind for present occasion, you may boil your Ingredients in Vinegar and Water ; but the Ink will not prove so good as the former.

To make Red Ink.

Take of the Powder of Brazilian Ounce, White Lead and Alum of each two Drams, Gum-arabick a Dram ; put these into a Pint of Urine, stopped close in a Bottle, and often shake them together, and the Business will be effected.

Another

Another Way for Red Ink.

Take of Gum-arabick half an Ounce, Vermilion an Ounce and a half, Lake a quarter of an Ounce, and Vinegar indifferent strong a Quart, mix them well together over a gentle Fire, and then let them stand awhile, shaking the Vessel when you come to use it.

To make White Ink to write on Black Paper, or the like ; as in case of consolatory Letters to those whose Friends are deceased.

Take an Ounce of Chalk, as much Quick-lime, and a quarter of an Ounce of Egg-shell, with half an Ounce of burnt Ising-glass, grind them well together, and put them into Gum-water of any kind to a thickness of Writing, and the Ink by Candle-light especially will appear like Silver.

To make Ink for the conveniency of Carriage in Powder, &c.

Take Lamp-black half an Ounce, the Powder of Galls an Ounce, Vitriol or Copper half an Ounce, Gum-Arabick a quarter of an Ounce, Ivory-black a quarter of an Ounce, make them into Balls with Water, adding if they stick not well together more Gum ; and when you have occasion to use it, scrape a little into a small quantity of Wine, Water and Vinegar, and stir it about, and it will be exceeding black Ink immediately ;

ately ; and so you may be always provided with it without fear of spilling, or want of it in Places of travelling, where there is none to be had ; and instead of Lamp-black, you may use burnt Cherry-stones ground to Powder.

To make a red Ink to carry to any Place as the former.

Take the Powder of Brazil finely ground or beaten, one Ounce ; mix with it the Juice of Mulberries or Black-berries, or, for want of them, Water wherein a little Lake has been dissolved ; and Gum-Arabick half an Ounce, to two ounces of the Powder ; wet them to a thickness, and making them up in Balls, use them as the former.

To make green Ink.

Take the Filings of Copper an Ounce, Verditer half an Ounce, Gum-Arabick half an Ounce, Vinegar half a Pint ; put them together in a Stove or warm Oven, and let them stand three or four Days ; then stir them together, and use the liquid Part.

To make Ink that will make an Impression, as that of Printers. &c.

Take of Lamp-black an Ounce, or for want of it Shoe-makers Black, half an Ounce of Vitriol, an ounce of fine ground Char-coal ; to these add a Quart of Linseed Oil, boil them up with stirring over a gentle Fire, till they become of a sufficient

cient thickness; then take out the Substance, and rub it upon a Stone, or on an Ink-block with your Muller, till it is very fine, and it will take the Impression as of Letters, &c. in the Nature of Prints, Pictures, &c.

Red Ink of the foregoing Kind,

Is made with Vermilion and Lin-seed Oil, well temper'd upon a Stone with a Muller.

To write Letters invisible but by Fire.

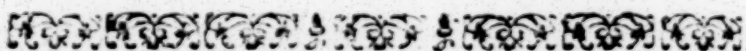
You must take the Juice of Lemon and Onion, temper them well together, and let your Paper be very dry; then write what you think convenient, and send it to the Party you design, who knowing the Mystery before-hand, shall no sooner hold it to the Fire, but those Letters which were blank before will fairly appear.

To make Letters appear by Water.

Take well dry'd Paper, and having dissolved a Quantity of Alum in Gum-water, write thereon, and suffering the Writing to dry, dip the whole Paper under Water, and the Letters will appear so much whiter than the rest, that they may be plainly distinguished and read.

To make Letters that cannot be seen or read, but by reading them through the Paper, &c.

Take White Lead finely ground with very weak Gum-water, and mix it as thin as the Consistence of Ink, write upon exceeding white Paper, not very thick ; and by that means, when it is dry it cannot be discerned from the Paper, but by looking at a Light placed on the other Side, and then the Letters will plainly appear by denying your Eyes to penetrate them, though the Paper be transparent.



C H A P. V.

Directions for cleansing, colouring Gloves, and perfuming them. The Way to scour Ribbands without much impairing the Colour. The Method of washing, starching, &c. Silks, as Lute-string, Lawns, Tiffanies, Sarcenets, &c. with other Curiosities.

To clean foul Gloves without wetting.

TAKE your Gloves, and lay them upon a clean Board, and make a mixture of Fulling-earth and Powder of Alum very dry, and pass them over on every side with an indifferent stiff Brush ; then sweep off that
and

and sprinkle them with dried Bran and Whiting a considerable time ; then dust them well, and if they were not extraordinary greasy, it will render them as clean as at first ; but if they were greasy, you must take out the Grease with Crumbs of toasted Bread, and Powder of Burnt Bone ; then pass them over with a woollen Cloth dipp'd in Fulling-earth or Alum-Powder ; and so you may cleanse them without wetting, which many times shrinks and spoils them.

To colour Gloves.

Take your Colours suitable to your Intention ; if dark take Spanish Brown and black Earth ; if lighter, yellow Oker and Whiting, and so of the rest ; mix them with a moderate Size, and daub the Gloves over with the Colour wet, and so suffer them to hang till they dry by degrees ; then beat out the Superfluity of the Colour, and smooth them over with a stretching or sleeking Stick, reducing them to their proper Shape.

To make an excellent Perfume for Gloves.

Take Amber-grease a Dram, Civet the like quantity, Orange-Flower-Butter a quarter of an Ounce ; and with these well mixed and odered, daub them over gently with fine Cotton-wool, and so press the Perfume into them,

Another

Another good Perfume on the like Occasion.

Take of Damask or Rose-scent half an Ounce, Oil of Cloves and Mace of each a Dram, Frankincense a quarter of an Ounce, mix them together, and lay them in Papers between your Gloves, and being hard pressed, the Gloves will take scent in twenty-four Hours, and hardly lose it afterward.

To cleanse cast Ribbands.

Take your Ribbands and smooth them out, having sprinkled them a little before with fair Water ; then lay them on a Carpet or clean Cloth at full breadth, and having made a thin Lather of *Castile Sope*, go over them gently with a Brush or fine woollen Cloth ; then having Water in readines, wherein a little Alum and white Tartar has been dissolved, go over them till you see them clean ; and so they will not only be clean, but the Colour fixed from further fading, if you suffer them to dry in the Shade, and then smooth them out with a Glass Sleek-stone.

The best and surest Way to wash black and white Sarcenet.

Lay it smooth and even upon a Board or Carpet, spreading a little Sope over the dirty Places ; then make a Lather with *Castile Sope*,

Sope, and having an indifferent ~~the~~ Brush, dip it therein, and pass over the Silks the right Way, viz. long-ways, and repeat this till you perceive that Side is sufficiently scoured ; then turn the other, and use it in the same manner : Afterwards take it up, and put it into fair Water scalding hot, suffering it to lie till such time as you have prepared cold Water, wherein a small quantity of Gum arabick has been dissolved ; as also, if for white Sarcenet, Smalt, into which you must put them and rinse them well : that done, take them out and fold them, clapping or pressing out the Water with your Hands on a Carpet that is dry, keeping them under your Hands till you find them indifferently dry. Then if the Sarcenet be white, you must have Brimstone ready to smoke or dry it over till it is ready for smoothing, which must be done on the right Side with a moderate hot Iron.

To wash and starch Tiffanies.

In this case the Hems of your Tiffanies must be first soaped a little, as also the Lace, if any be on them ; then having a Lather of Sope, put them into it hot, and gently move them by squeezing them only, and not too roughly rubbing them, lest they break or crumple over-much ; and when you find they are pretty clean, rinse them in warm Water, in which a little Gum-arabick has
been

been dissolved, keeping them as much from the Air as possible. This done, make Starch of a reasonable thickness, blueing it as you think convenient, adding a little Lump of Alum to be dissolved therein; and when it is boiled to a convenient thickness, strain it, and while it is hot, wet your Tiffanies therewith gently, doing it with a soft Linen rag, and fold them up in a clean Linen Cloth, pressing them therein, till they are somewhat dry, after which clap them between your Hands near a good Fire; then finish the drying them over Brim stone, and shape them to your purpose, and either sleek them over, or gently Iron them.

Lawns may be ordered in the same manner; only observe to Iron them on the wrong side, and using Gum Arabick Water instead of Starch; and according to what has been directed for black Sarcenet, any coloured Silks may be ordered, abating, or augmenting your Gum Water as you think fit, according to the stiffness or limberness intended.

To wash and starch Point-Lace.

Have a Tent prepared, fix the Lace in it, and draw it pretty streight; then having a Lather of Castile Sope pretty warm, with a fine Brush dipped therein, rub your Point gently over, and when you perceive it clean on the one Side, then do the like on the other;

other ; then cast it into fair Water, in which a little Alum has been dissolved to take off the Suds ; then having very thin Starch, go over it with the same on the wrong Side, and on the same Side iron it when dry ; and so with a Bodkin open it, and set it in Order.

To clean Point-Lace, if not over dirty without washing, fix it in a Tent as the former, and go over it with fine Bread, the Crust being pared off ; and when it is done, dust out the Crumbs, &c.

C H A P. VI.

Instructions for ordering and framing curious Wax-work, imbossing in Silver or other Metals, making Flowers of Silk, carving and casting Imagery in sundry Figures, the Art of polishing, &c.

The Nature of Wax-work, and how to be managed and performed.

IN this Case you must provide yourself with the finest Virgin Wax, clarify it by often melting over a Fire, till it become exceeding pliable, then put in a Quantity of clarified Turpentine ; and having considered your Figure, you must work it in Water a little warm, and move it into a curious
F Flatness ;

Flatness; then imboss it in Moulds, or as some will have you, cast it, especially where a curious Resemblance of a Head or Face is required, working the rest of the Body proportionably upon Sticks or Wires, ruffling as you see Occasion or plaiting them; then having your suitable Colours, paint each Part with water Colours prepared according to what has been directed in painting or limning with those Colours, and with a small ivory Polisher go gently over those Parts you would have to shine; then having prepared Glasses to cover them, which will give them the greater Lustre, place them where you please for Ornament.

As for Birds, Beasts, Trees, Fruits and the like, they must be tempered after the former Manner, reduced in their sundry Shapes, not forgetting to give every one its proper and natural Colour; and for the Ornament of any Landskips, represent the Ground, where Grass is required with Moss, which may in like Manner serve for Shrubs: But in Case of the Leaves of green Trees, they may be Paper or Horn, thin and finely coloured, shaped and twisted upon Wires as you shall see convenient: But as to every particular of this Kind, 'tis only Practice can perfect you.

To imboss Plate, Pewter, Silver, or other Metal.

Having your Device drawn upon the Piece you intend to imboss, you must lay the right Side upon a Bed of Bees-wax covered over with a fine Cloth; then proceed to punch out the Metal with Punchers or Tools for that Purpose, going over every Stroke and Line as in Case of etching or graving; which done, you must turn the right Side, and fill the Embossments with Wax, that the Hollows may bed close and not sink; then with your fine Tools and Graver polish and work the Shapes in their due Order, by correcting and amending the Roughness made by the punching out, and giving fine Touches and Strokes where you see it needful, and the Figures will appear very pleasant, being a Performance of great Antiquity.

To work Flowers, &c. in Silk or Silver.

Take raw or sleasy Silk of sundry Colours, comb out the Dross or Ravel, laying each Colour by itself; then twist and mingle the Colours by placing them upon Wires, according to the natural Form of the Flower intended; then comb them out, and fashion them more exactly with your Scissors and Needle; then dip them in Gum-water, and by drawing them through it, whilst wet,

Open and shape them with your Fingers; that done, set them to dry in the Shade; and in that Form they will remain very pleasant and delightful: And thus you may perform them single, or on Branches with the Stalks suitable, &c. You may in this Manner form Fruits, and other Things.

Carving of Images, &c. what is to be materially observed therein.

Resolving to carve any curious Figure, you must provide yourself with a Likeness; either in Statue or Portraiture; whether it be for Wood, Ivory, or any Thing tractable in this Nature; and before you proceed to your rough carving, with a black or red Lead Pencil, or Piece of Coal, draw as well as you can the true Proportion, Posture, and Features, having before reduced the Wood or Stone to some set Form; then cut them out as you see convenient, or let them swell curiously; then with smaller Tools proceed to polish them yet finer; and so working by Degrees, till you have brought your Matter to a Proportion; and then remains the Curiosity of fashioning to the Life, and in this you must be curious in eying your Copy, beginning with the Head or upper Part; and so descend by Degrees, running it over three or four Times before you come either to washing or polishing, that no unseemly Knob or other Deformity may appear,

appear, &c. And in Case any Statute or Image, either cast or carved, require to be painted in lively Colours, the Rule for painting in Oil ought to be observed, as well in the Mixtures as laying on.

In casting of Images or Figures, the curiosity lies in forming the Mould, and bringing the Stuff to a fineness, which if done in beaten Chalk, Terrace, Plaister of Paris, or the like, they must be mixed with Gum-water, the better to strengthen them, but in case of Lime, &c. it needs not; and then no more is required than bringing the Stuff to a fit temper or stiffness of dough; and the Mould being to clasp in the middle, and take asunder, fill it with the Material, and squeeze it hard in a Vice, having rubbed the out-side of the Mould before with dry whiting or Chalk finely beaten, to prevent the sticking; then take it out and set it to dry in a place where there is a Stove, and when it is thoroughly dry, you may glaze or colour it at Pleasure.

If you design any Figure in Metal, and will not be at the trouble of imbossing it in the Expanse; and so soldering it together, thereby rendering it hollow as in fine Metals; then must you make your Mould of Brick, Chalk, fine Clay, or the like; and place it, when dry and firm, in a Bed of Sand, or in the Ground, keeping it close together; have then your Metal cleansed or purged from Dross by well refining, and

a Trough or Spout layed from the Plug of your Melter, and when the Metal is melted and scummed, suffer it all at once to run quickly into the Mould, that every Part taking hold of each other whilst liquid, the whole Mass may the better incorporate and render the thing designed without flaw or scaling ; suffer it then to be thoroughly cold before you take it out , which done, polish it by taking off the rough outside, and proceed with your Tools to rectify what is unseemly.

To polish Marble or any curious Stone.

Take fine Sand, and the Powder of Alabaster, polish it with a Polisher ; and then suffer it to be laid over for a time with Oil ; after that calcine, or burn Egg-shells, and with the calcination thereof, rub off the Oil, and polish it, and it will be of a lasting Gloss, &c.

To make any Writing on Parchment or firm Paper, decay and become unlegible in a short time.

Take Quick-lime, and mix with it the White of an Egg, and rub the Parchment or Paper over with the said Mixture when you intend to write ; and although the Writing for a time will seem fair, it will in a short time decay, and look so faint, that it can by no means be read.

To

To make new writing look old, and of a long standing.

Take a Dram of Saffron, and infuse it into half a pint of Ink, let it warm over a gentle Fire, and it will cause whatever is witten with it to turn yellowish, and appear as if of many Years standing.

To make a curious Purple Ink.

Take a quarter of an Ounce of *lake*, and half an Ounce of Indico, and bruise them small; which done, warm half a pint of Water, and infuse into it an Ounce of Gum-Arabick; then put the Colour in, and shake them well together.

To take Blots or Letters out of Paper or Parchment.

Take an Ounce of Alum, dissolve it in a quarter of a Pint of Water over a gentle Fire, and drop a Drop of it warm as you see occasion upon the Spot, and suffering it to lie for a time take, it up again with clean Cotton on which you have breathed to moisten it, and the Business in once or twice doing will be effected.

To render Writing very fair.

Take Gum sandrick, bruise and sift it very fine, dip Cotton into it and gently rub your Paper

per or Parchment therewith ; this is called
pouncing it, and is often used by School-
Masters to set off their Copies to advan-
tage.

*To write Letters like Gold without the Help of
Gold.*

Take of Vermilion half an Ounce, Gum-
ammoniack the like Quantity, bruise and
mix them with the Whites of a couple of
Eggs, and temper them in Water to a thin-
ness, that you may write therewith ; and
then your Writing being dry, glaze it over
with a Polisher.

*To write Letters that will appear like Silver,
without any Silver.*

Take of Block-tin, Quick-silver, and the
Whites of Eggs, each an Ounce, melt the
two former, and having ground them fine
and small, put them to the latter, and mix
them with Gum-water to the thinness of
Ink ; and so proceed to write, polishing
your Writing, when dry.

*How to prepare your Shell-Gold, and write
with it.*

Take the ragged Cuttings of Leaf Gold,
grind them upon a curious smooth and clean
Stone with Gum-water and a little Alum
Powder ; and when they are well incorpo-
rated, drop this Substance into small Shells ;
and

and when you use it, temper a little fair Water to bring it to a thinness; and having written what you please with it let, it dry; and then polish the Writing, &c.

To make a good red sealing Wax.

Take of Bees-wax a Pound, fine Turpentine three Ounces, red Lead or Vermilion finely ground an Ounce and a half, Olive Oil an Ounce, melt well the Wax and Turpentine, adding an Ounce of Rosin in fine Powder; and when they are well melted, and the Dross taken off, put in the Lead or Vermilion, and stir them well together, till they are well incorporated; and so make them into what Form you please for your Use.

To make black Wax.

Take of Lamp-black or black Earth an Ounce and a half, Turpentine and Rosin of each four Ounces, of Bees-wax a Pound, incorporate them as the former with Oil.

To make green Wax.

Take Verdigrease an Ounce, and all the other Ingredients, except the colouring as the former, ordering it in the like Manner.

To make golden or transparent Wax.

Take clarified Rosin four Ounces, Turpentine 2 Ounces, Bees-wax 4 Ounces, olive Oil two Ounces, melt them well together; and scatter in the melting disordered or shattered

tered Leaf Gold, and suffer it to mix and incorporate; then polish it over, when made into Form, and the Gold will appear in the Transparency.

To make sealing Wafers.

Take fine Flour sifted or boulded, that no Bran remain therein, mix with it the White of Eggs, a Quantity of Ising-glass and a little Yeast, mingle the Materials, beat them well together, spread the batter, being made thin with Gum-water on even tin Plates, and dried in a Stove, then cut them out for your use: To make them red add red Lead; and Lamp black, if you require them black.

C H A P. VII.

How to make artificial Vinegar, to extinguish the Fire in Chimnies on a sudden, to blow up Ships under Water, to blow up Houses, and weigh Vessels that are sunk; with Dialling and Gauging, &c.

A Way always to be provided with Vinegar for Sauce wherever you travel.

TAKE the Blades of green Corn, when young, beat them exceeding small in a wooden Vessel; then strain out the Juice, and take the remaining Substance, and steep it in strong

strong White-wine-vinegar, or the Juice of Lemons, and suffer it gently to warm over the Fire; let it stand in a warm Place, till the Vinegar be consumed; and then make the Matter up into Balls, and put them into a Box and dry them; and so coming into any Place where Vinegar is not to be had, scrape a little of the Powder into a little Water, and it will afford you, when heated over the Fire, stirred well together, a very good Sauce.

In Case of the firing a Chimney, the Means whereby it may presently be extinguished.

Take an Ounce of Gun-Powder, and a quarter of an Ounce of Brimstone finely beaten, wet them with Water, and make Wild-fire thereof, and throw it in small Pieces into a small Pan of Char-coal or coal Fire, that the Smoak may go directly up the Chimney, and it will cause the Soot the Fire has taken instantly to fall by Parcels, till there be none left.

To break, or blow up a Ship or Vessel that is sunk, though lying some Fathoms under Water.

To do this, you must find how the Vessel lies; and if you can conveniently let down a Barrel, or more of Powder in a stanch Cask with a Cane or Leather Pipe let into it, and pitched round, so that it may, when
the

the Barrel is sunk to the lowest, appear with the uppermost Part above Water; then having a Boat ready, and a red hot Bolt of Iron with a Pair of long Pincers, drop it into the Cane or Spout, so that it may fall into the Powder, then make off as fast as you can, and you will perceive immediately a trembling of the Water, and after that a Smoak to burst out; and the Planks, Goods, or any Thing capable of floating will rise, the Vessel being broke by the Force of the Powder.

The best Way to weigh any Vessel that is sunk.

Lash a couple of Vessels together, and grapple the Vessel sunk, fastening the Grapples to a Pole lying a-cross the two Vessels, the said Vessels being filled and low sunk by their Weight; then empty them that they may rise, and they will cause the sunk Vessel to rise with them as far as they rise; then tow them as near to the Shore as you can at high Water, and at low Water the sunk Vessel will appear above it, and you may empty it at your Pleasure: And in this Case twenty un of Vessels, Floats, or empty Casks above Water will raise a 100 Tuns under Water.

The best and safest Way to blow up Houses to prevent the Progress of a Fire.

If it happens the House be Timber, and you would throw it off from the Fire, place
your

your Barrel of Powder under the main Girder on the contrary Side you intend to turn it, and over it a Beam or Piece of Timber, and fix in that another upright, scotch the Barrel, on either Side lay a train upon Boards, covering it with Cloth to prevent its taking Fire before you intend it; and then having a Piece of Match fastened upon a Lin-stock, give Fire to your Wild-fire at the End of the Train, and so retire.

If you would take a Timber or Brick-house upright, place the Powder in the Cellar under the main Beam in the Manner aforesaid, just in the Middle; or if there be no Cellar, bed it about as much as may be, and it will take it directly up from the Foundation; and then suffering it to fall directly down, it will break in Pieces; then the Timber may be drawn away to prevent the Fire's over-running it, and by that Means creep to the next Building, and render your Undertaking fruitless.

To make a Sun-dial upon the Ceiling of a Room, and convey the Beams of the Sun to it.

Prepare the Cieling exactly level by raising it with fresh Plaster, if there be any Defect; draw your Dial according to the Form of a horizontal Dial, making the Lines and Distance of equal Frame, set up your Gnomon or Shadower, so that you may move it and leave Blanks for the Figures; this done,
con-

conveniently place a Looking-glass, or burnished Piece of Iron or Steel, so that it may reflect the Light of the Sun upon the Dial intended; then observe by another Dial how the Light moves, which it will do with the Sun; and according to that, being a true one, place your Figures; then take off the Gnomon or Shadower, and lay it aside, fixing the Glass or burnished Steel, that it may remain not subject to be removed or shaken; and you may at any Time without stirring out of the Room, know whilst the Sun is upon the Dial what it is o'Clock.

To make a Dial in the Glass of any Window, that has the Benefit of the Sun.

Take a curious square, smooth Pane or Quarry of Glass, fix it even with strong Borders of Lead in the Window, and set up the Gnomon, siding, flaunting, or direct, according as the Sun has Power upon it: Then by a Watch-Clock or other true Dial, mark how the Shadow moves to the Time of the Day with the Point of a Diamond, and accordingly draw the Lines from the Center, and frame the Figures in due Proportion and Distance.

Directions to Measure or Gauge any round Cask or Vessel, &c.

In the first Place multiply the half of the thickness in Inches, by half the Circumference,

ference, and that Product by the length in the Inches; the last Product for Ale divide by 288, and the quotient shews the Number of Gallons in the Barrel; and to bring these Gallons into Barrels, divide the quotient by 36, for so many in Case of Beer a Barrel contains. But in Case the Vessel very much bellies in the Middle, measure but half of it to the Bung, and work it as before; and adding the Products together, you will have the true Account.

C H A P. VIII.

Another Treatise on making sundry Inks.

To make a Powder upon which you may write with Water, &c.

BRUISE to Powder a handful of Galls, half an Ounce of Vitriol, and the like Quantity of Gum-Arabick, and Gum-Sandrick; mingle them finely sifted together, and when you have Occasion to write, rub your Paper over with a little of it laid upon Cotton-Wool; and then having sufficiently smoothed it, take Water and write upon the said Paper; when suffering it to dry, it will take a black Impression, occasioned by the Powder, as if it had been written with Ink.

Another

*Another curious Ink-Powder, fit for Travellers,
&c. or the London Ink-Powder.*

Take ten Ounces of Nut-Galls, bruise them well, three Ounces of *Roman* Vitriol, Gum-Arabick and Roch-Alum, of each an Ounce, making them into fine Powder, sift and dry them, then put the Powder up in close Boxes or Papers, and when you have Occasion to use it, put a little Quantity into a good Quantity of Water, and shake it well about, and it will instantly change the colour of the Water, and at length become good Ink; that is, in less than two Hours space; by which Means any Person without giving himself considerable Trouble of Carriage, may be furnished at all Times.

How to make another curious Powder of the like Efficacy, and lately known by the white Powder-Ink, so much coveted of late, &c.

Take Gum-Sandrick two Ounces, beat it well to Powder, and sift it through a fine Sieve, and as much *Calcanth*, so called by the *Latins*, of which you may furnish yourself at the Drugists; mix them being well beaten and pulverized; and a quarter of an Ounce of this, or little more, will turn a Pint of Water or Vinegar, into a curious writing Ink in a very short Time.

Meth-

Matheolu's Direction for making a curious and lasting Ink, &c.

Take five Ounces of Galls well bruised, *Roman* Vitriol three Ounces, Gum-Arabick two Ounces, Bay-salt a Drachm, or instead of it a Quantity of Alum; mix them well together in a new glaz'd earthen Pot, and pour upon the Mixture about five Pints of White-wine, very strong and hot, and the Weather being hot, let it stand in the Sun for the space of fifteen Days; or it may be done in a Stove, Oven, or in the Chimney-corner, frequently stirring it about; pouring out the Dross, an excellent Ink may be had, not subject to change by Time, nor alter its Colour.

Two excellent Ways of speedily making Ink, &c.

1. Take Vitriol and Gum-Arabick of each an Ounce, of Galls well broken a like Quantity, of sharp Wine or Wine-vinegar ten Ounces; let them to stand together for an Hour, sometimes shaking them, and they will turn the liquid Part exceeding black, and render it fit for your Use.

2. Take of Galls half an Ounce well bruised, mingle with it a like Quantity of Gum-Arabick, and of *Roman* Vitriol eight Drachms, put these into eight Ounces of White-wine pretty hot, and in as short a Time as the former, a perfect Ink will be made.

How

How to make a Black that will not only serve for Ingrossing, but Painting, &c.

Take Copperas half an Ounce, bruised Galls an Ounce, Lamp-black an Ounce, Gum-Arabick half an Ounce; mix them with a Pint of Wine or Vinegar, set them over a gentle Fire, and suffer them to simmer till half be consumed, and what remains will render an excellent thick and black Ink.

The famous George Machijus's Receipt for curious Writing-Ink, &c.

Take of Galls three Ounces, Roman Vitriol two Ounces, Gum-Arabick half an Ounce, and having well bruised them, infuse the Galls in two Quarts of White-wine, for the space of eight Days, stirring them well about each Day; and three Days after putting in the Galls, put the Gum in, dissolved in a little Wine by itself; stir it often, and at the End of eight Days, the Ink will come to a full and curious Perfection.

To make a Kind of Ink to write obscurely, and not to be read, unless the Paper whereon the Writing is, be held to the Fire.

Take Sal-Armoniack and Nitre, of each half an Ounce, mix them with the Juice of Lemon over a gentle Fire; and having refined the liquid Part from the Dross, use it when cold; by holding the Paper when it is written on to the Fire, the Letters will
fairly

fairly appear, or otherwise they will not, &c.

To take away spots or defects out of Writing, either on Paper or Parchment.

Take Roch Alum burnt half an ounce, as much Flower of Brimstone; and being finely in Powder, wet the Paper a little, and put a small quantity of the Powder upon the place, rubbing it gently with your Finger, and the Spot will disappear. Thus much for the Treating of Inks, &c. wonderfully necessary and useful on all Occasions, and profitable to those that will undertake to make them for Sale.

C H A P. IX.

The Art of making Waskes, and other Beautifying Materials, for taking away Sunburn, Morpew, Freckles, Roughness of the Skin, and restoring a curious Complexion; as also Whitening the Teeth, Enlivening the Eyes, Curling and Colouring the Hair, &c.

A Water to restore a faded Complexion.

TAKE the Flowers of Rosemary, Comfrey, and Camomile, boil them in White-wine. and wash your Face and Hands therewith Morning and Evening, &c.

To

To create a very fair Complexion.

Take two ounces of white Tartar, burn or calcine it, then quench it in the distilled Water of Roses, and wash the face with it.
To render a Complexion fresh and comely.

Take an ounce of Oyl of sweet Almonds, the like quantity of the Oyl of Myrrh, bruise in them of the Powder of Gum-Sandruck a grain, and with the whole mixture rub and anoint the Face.

To render the Skin clear, and of a very fair Complexion.

Take Bean Blossoms, and the Water that distills from the Vine, with the Flowers of Fumitory; distill them, and make a wash with the Water.

To make the Skin smooth and Shining.

Take of the Marrow of Swines-feet an ounce, Oyl of Nutmeg a quarter of an ounce, Deer-suet half an ounce, Oyl of Bay berries two ounces; make them into an Oyntment over a gentle fire, and anoint the Face, hands, or any part of the body therewith.

To remove Freckles, Tan, or Sun-burn.

Take the Juice of Burdock leaves and Lemons, of each a like quantity, mix them together, and add half as much Oyl of Camomile, a little Rye-meal, and the Gall of
 a Cock

a Cock or Capon, make them into an Ointment, and anoint the place therewith, and in a short time the defect will be removed

To remove Pimples or Redness

Take an Egg and roast it hard, then take out the Yolk at the top, and fill it up with Coperas, and put it close covered in the Embers, till the Coperas is melted or become water; then pour out the Water and bath the Face with it; but if it be too sharp, you may allay it with the Water or juice ofcelandine; and in often using it, your Expectation will be answered.

To remove the Redness in a Face, &c. occasioned by Scalding, Blasting, &c.

Take a Handful of the Bark of Elder, as much Rue and the Roots of Scabious, with an Ounce of the Flowers of Camomile; bruise them together, adding a quarter of a Pint of Verjuice; then boil them in a Pint of Milk and half a Pint of olive Oil, till the Liquid Part become thick as an Ointment, then strain it out; which being cooled, anoint the Place therewith Morning and Evening.

To take away Warts or Moles not too deep impressed.

Take Rhubarb a Drachm, Camphire the like Quantity, Oil of Petroleum half as much,

much, an Ounce of the Juice of Houfleeke; bruise and beat these in a Quarter of a Pint of Vinegar over a gentle Fire, and anoint the Part therewith, and in often so doing, you will find your Desire effected.

To make a swartby Complexion fair and clear.

Take the Liver of a Goat, dry it to Powder in a Stove or Oven, then steep the Powder in White-wine, adding a quarter of a Pint of the Juice of Celandine, an Ounce of Coriander-seeds and Fennel; boil them over a gentle Fire, and with the Liquid Part anoint or bath the Face, &c. and so continue to do often, and it will remove the chole-
rick Humour occasioning Swarthiness.

To brighten and enliven the Eyes.

Take Vervein, Pelitory of the Wall, Smal-
lage, and Betony, with the Flowers of Eye-
bright; distil them, and wash the Eyes with
the Water Morning and Evening, and it will
not only render them bright and clear, but
mend the decayed Sight.

*To make Bloom-water, an excellent Beautifier
upon all Occasions.*

Take the Blossoms of Peaches, Balm, La-
vender Cotton, and Rosemary; steep them
in White-wine, and distil them, and the
Water will prove an excellent Beautifier.

To make an excellent Pomatum for the Hands and Face.

Take Sheeps Marrow an Ounce, Oil of sweet Almonds the like Quantity, the Juice of Smallage a quarter of a Pint, Bean-flour half an Ounce; make them up into an Ointment, and anoint the Hands and Face warm therewith, and it will make them plump, soft, and free them from Cracks, Chops or Roughness.

An excellent Paste for the Hands.

Take the Flour of sweet Almonds an Ounce, Rye-meal two Ounces, white Starch an Ounce, and Milk half a Pint, with which make a Paste, and that Paste into Balls for your Use.

An Oil to soften the Skin, and render it fresh, &c.

Take of the Oil of Nutmegs an Ounce, Ambergrease a Drachm, Oil of Camomile an Ounce, the Juice of Comfrey half a quarter of a Pint, make them into an Oil or Ointment over a gentle Fire, and supple them into the Skin very hot; and in often so doing, it will wonderfully beautify, and cause an excellent Flavour, &c.

An excellent Way to sweeten the Breath.

Take Sal-Armoniack a Drachm, beaten Ginger two Drachms, Cloves a Drachm, Coriander-seeds in fine Powder a quarter of an Ounce, Oil of Mastick a Drachm, bruise them

them together, and make them up into a Ball, and each Morning scrape about the Quantity of a large Pea into a Glas of Wine or Beer, and drink it off.

To make Hair grow.

Take of the Powder of Bithwort-roots a Drachm, of the Juice of Fennel half an Ounce, Ivy-berries dried and beaten into Powder an Ounce, the Juice of Housleek half a quarter of a Pint, White-wine a Pint; boil these over a gentle Fire to a half Consumption of the liquid Part, with which wash the Place deficient, and in a short Time if that Part be subject to Hair, it will cause it to grow and increase.

To take away Hair.

Take the Juice of Hellebore or Bears-foot half an Ounce, as much of that of Burdock roots and the Roots of Cuckowpintles, and anoint the place with it warm, and by often so doing, the Hair will fall off.

To make any coloured Hair black, or of a dark Colour.

Take burnt Ivory ground to Powder a quarter of an Ounce, Soulters Ink the like Quantity, the Juice of Hemlock a quarter of a Pint; incorporate them over a gentle Fire till the Moisture be near consumed; then add black-lead Powder to dry up the rest, and with this rub your Hair or Powder it,
and

and it will be a curious lasting Black, if you wash your Head first with White-wine wherein Plantane-roots have been boiled.

To make Hair curl.

Take the Powder of Elecampane roots well dried, as much Alum in fine Powder, wet your Hair a little with Water wherein Raisins have been steeped, and so sprinkle on the Powder with a fine Sprinkler, that it may be all over; then with a Pair of Curling-Irons not too hot, turn it up in Ringlets under a Cap, &c. and so let it dry, for the space of a Night; next Morning comb it out, and the Powder that remains will not only fly away, but the Hair will fall into curious Curls, and so continue without any further Trouble for a very long Time.

AWay speedily to take away the Spots occasioned by the Small-Pox.

Take half an Ounce of Copperas, dissolve it in the Juice of Lemons, and anoint the Spots with it when warm, and their Redness will soon disappear.

To prevent Pittings.

When the Distemper begins to appear, rub the Face over gently with Honey, Oil of Roses, and a little Alum dissolved and well mixed together over a moderate Fire, and in so doing every other Day, the Pitts
G will

will be prevented, if the Party uses no Violence to himself by scratching, &c.

To whiten Teeth.

Take a Piece of fine Pumice-stone, grind it to Powder, adding to that Powder a little Quantity of Alum-powder, and by often rubbing the Teeth with it, they will if sound be as white as Ivory.

C H A P. X.

A Miscellany of rare and curious Secrets not yet touch'd upon.

How to separate Gold and Silver from other Metals.

TAKE Mercury and put it in a melting or refining Pot on the Fire, adding some Varnish-Glass beaten to Powder, and being finely mixed, lay it in Powder upon the Metal that is gilded with Gold or Silver, and set some hot Coals under it, and it will take off the gilding, and render the Metal as if it had never been gilt; and in this Case you may save the Gold and Silver, if of Value, by putting to it Quicksilver, which will attract it into a Body.

To kill or allay Mercury or Quicksilver.

Put it in a Mortar of Iron or Brass, adding some olive Oil, mix them together as well as may be over a gentle Fire, adding first when it begins to bubble strong Wine-vinegar; and in so using the aforesaid Materials, they will become so hard as easily to endure the Hammer.

To boil Gold and Silver in the Way of Cleansing.

Take Tartar bruised to Powder, put to it a considerable Quantity of Spring-water; being boiled up over a quick Fire, put in the Plate, and let it continue for a considerable Time.

To soften Gold or Silver.

Take sublimate Mercury, Sal-Armoniack, of each a like Quantity, and when the Metal of either Sort is melted, put a small Quantity of this Powder into it, and suffer it to operate thereon; if Gold put more; if Silver less.

To soften Bone or Ivory.

Take Bone or Ivory that is hollow, the Juices of Alexand. Milfoil, Radish-roots, Hore-hound and sharp Wine-vinegar, and fill the Cavity; after which, lay it near a gentle Fire, that it may grow hot; and in suffering it so to do, in a little Time it will mollify the hard Quality.

Experiments of other Natures, viz. How to keep Grapes fresh all the Year.

Gather the Grapes in a fair Day, when no Wet or Moisture is upon them; cleanse them from those that are any ways perished, and let them steep a while in white Muscadine a little warm; after which dry them and stop them up in new earthen Bottles, setting them in a cool Place free from the Sun or too much Air, and they will keep without perishing.

To make Melons, Cucumbers, or such-like Fruit ripen by Art.

Boil Wheat-bran in Water and a little fine Mould, and water the Roots of the Plants with it Morning and Evening, setting them in hot Beds, and covering them from Colds and Blasts with Pots, Glasses, &c.

To make Trees bear Fruits of any Colour.

Bore a Hole in the Body of the Tree, at such Time as the Sap begins to rise, and plug it up close, and you will perceive what liquid Colour you put in, the same will tincture the Fruit, and give it a Participation of its Hue.

To kill or drive away Fleas or Buggs.

Take the Juice of Rue and the Gall of an Ox, mix them together, and anoint the Post
and

and Frame therewith, and strow in the Mat Powder of Southern-wood and Wormwood.

To make one that is very boarse, or speaks inwardly, have a very clear Voice.

Take the Flowers of Elder, dry them in the Sun, and so order, it that without taking wet they may be beaten to Powder; which done, keep the Powder in a Glasse, and when you would use it, put as much as will lie upon a Six pence, into a Glasse of Wine pretty warm, and drink it off.

To make Letters that will soon vanish.

Take Aqua-vitæ, dissolve a little Camphire in it, and put to them the Ashes of burnt Straw well mingled or tempered together, which for a Time will produce a fair Writing; but at your Pleasure you may wipe it off the Paper or Table, nor will it be long e'er it decays of itself.

To renew Letters decayed.

Boil a few Galls in Wine, and wipe over the faint Letters with a Sponge dipped in the Juice, and they will appear fresh and in full Lustre as when written.

To remove the Marks in Knives that are in a Manner worn.

Polish them well with Powder of Emery and Oil; after that, cleanse them with Chalk.

to a Brightness, then wet the Blades in Lime Juice and Tanner's-water made with Vitriol, and they will cause the Marks to appear exact and fair; and this Way you may damask them

How to grave a Porphory-Marble without an Iron-tool.

Take a small Quantity of sublimate Mercury, a like Quantity of Sal-Armoniack, with as much Verdigrease, distil them in a glass Retort; calcine a small Weight of Tin and Fire-stone, and some Sal-Gem, distilling them over three Times in sharp Vinegar, and so making a Ground of Wax, Rosin and Turpentine, lay it on the Stone as in the Case of Etching; and when you have drawn with an Iron-point what you intend, pour on the Water, and suffer it to continue till it has corroded the Stone according to what you drew upon it.

How to make Water rise by Heat, &c.

Let there be a Vessel above, either of Brass, Clay or Tin, and a Pipe in the Middle of it, that may descend into the Water below, so fastned that it takes not Air; then let the Vessel above be made hot, and it will by Means of the Air's being rarefied by the Heat attract the Water to it.

C H A P. XI.

Another Miscellany of rare and curious Experiments, useful, profitable, and altogether pleasant, &c.

To cause Water (contrary to the Nature thereof) to ascend.

PRepare a Bason with a Pint of Water in it, or thereabouts, then take an earthen Pot or Jug with a round Belly (fitted for this Service) and light a Piece of Paper, cast it into the Jug flaming, then turn quickly the Mouth of the Jug downward, and set it on the midst of the Bason of Water, and it will suck up all the Water, if it be not more than it can receive and contain within the Belly thereof.

To carry a Jug or earthen Pot, sticking without any Thing, unto the Palm of the Hand.

Take a Piece of Paper, set it on Fire and cast it flaming into the Mouth of the Jug, presently clap the Palm of your Hand on the Mouth of the said Jug or Pot, not hollow, but plain and smooth; the Jug will not fall from your Hand, but you may walk many Paces, and carry the same sticking under the Palm of your Hand, unless by Violence you pluck it away.

To break a Stick placed upon the Brims of two Glasses, and not break the Glasses.

Place the Glasses on a smooth Stone of an equal Height, and put the Stick upon them; then take a Broomstick or Poker, and therewith strike upon the midst of the Stick perpendicularly or downright; so may you break the Stick, and not hurt the Glasses..

To take the Impression of any Seal.

Melt a little Brimstone, casting in some Cerufs or white Lead, put this Mixture on the Seal, strengthening it with a small Piece of Paper, a little bigger than the Impression is; being cold, take it off, and you will find the Print of the Seal thereon.

How to write Letter secretly, that cannot easily be discovered or suspected.

1. Write your Mind at large on one Side of the Paper with common Ink, and that which you would have secret, with Milk on the other Side; and when you would make the same legible, hold that Side which is written with Ink to the Fire, and the milky Letters will shew blewish on the other Side.

2. Rule two Papers of one Bigness with Lines of an equal Distance, make the one full

full of Glafs-windows, through which you must write your Mind upon the second Paper, then fill up the Spaces with other Words at your Pleasure ; but if all were made to hang together in good Sense, it would carry the less Suspicion. Each Friend must have one of these cut Papers to read all such Letters, for without the Paper it will trouble a good Decypherer to read the Letter.

Of the Dial upon the Fingers and the Hand.

Is it not very agreeable, when one is in the Field, or in some Village, without any other Dial, to see only by the Hand what of the Clock it is ? which gives it very near, and may be practised by the left Hand in this Manner.

Take a Straw, or such-like Thing, of the length of the Index, or the second Finger, hold this Straw very right between the Thumb and the right Finger, then stretch forth the Hand, and turn your Back and the Palm of your Hand towards the Sun, so that the Shadow of the Muscle which is under the Thumb touch the Line of Life, which is between the Middle of the two other great Lines, which is seen in the Palm of the Hand ; this done, the End of the Shadow will shew what of the Clock it is ; for at the End of the great Finger it is 7 in the Morning, or 5 in the Evening ; at the End of the ring Finger it is 8 in the Morning, or 4 in the Evening ; at the

End of the little Finger, or first Joynt, it is 9 in the Morning, or 3 in the Afternoon, 10 and 2 at the second joynt, 11 and 1, at the third joynt, and mid-day in line, following, which comes from the end of the Index.

How to make Water boil and sparkle.

Take a Glafs near full of Water, or other liquor, and setting one hand upon the foot of it to hold it fast, turn slightly one of the fingers of your other hand upon the brim or edge of the Glafs, having before privately wetted your finger, then passing softly on with your finger in pressing a little, and the Glafs will begin to maké a noise. Secondly; the parts of the Glafs will sensibly appear to tremble. Thirdly, the Water will shake and seem to boil: Fourthly, It will cast it self out of the Glafs, and leap out by small drops, with great astonishment to the standers-by, if they be ignorant of the cause of it, which is only in the tremulation of the parts of the Glafs, occasioned by the motion and pressure of the Finger.

Of the Play at Nine Pins.

You will scarce believe, that with one Bowl, and at one blow, playing freely, one may strike down all the nine Pins at once, yet from Mathematical Principles it is easy to be demonstrated, that if the hand of him that plays was so well assured by Experience, as Reason

reason induceth one thereto, one might at one blow strike down all the nine Pins, or at least 7 or 8, or such a Number as one pleaseth.

For they are but 9 in all, disposed or placed in a perfect square, having three every way : Let us suppose then that a good Player beginning to play at 1, somewhat low, should so strike it, that it should strike down the Pins 2 and 5, and these might in their Violence strike down the Pins 3, 6, and 9, and the Bowl being in motion, may strike down the Pins 4 and 7, which 4 Pin may strike down Pin 8, and so all the nine Pins may be struck down at once.

Any Numbers under 10 being thought upon, to find what Numbers they are.

Let the first Number be doubled, and unto it added 5, and multiply that sum by 5, and add to it 10 ; and the next Number thought upon : Multiply the same again by 10, and add to it the next Number, and so Proceed.

Now if the last sum be told, mark if one Number was thought upon, then subtract 35 from it, and the first Figure in the place of Tens is the Number thought upon. If he thought upon two Figures, then subtract 35 also, and the 2 also, the said 35 from the last sum and the 2 Figures that remain, are the Numbers thought upon. If he thought upon

upon 3 Figures, then subſtract 350, and then the 3 firſt Figures are the Numbers thought upon, &c.

Example.

If one thought upon theſe Figures, 5, 7, 9, 6. Double the firſt, which is 5, and it makes 10, to which add 5, it makes 15; This 15 multiplied by 5, makes 75. To this 75 add 10, it makes 85. To this 85 add the next Number, viz. 7, it makes 92. This 92 multiplied by 20, makes 920, to which add the next Figure, viz. 9, it makes 929. This multiplied by 10, makes 9290. To which add 6, being the laſt Number, it makes 9296. From which ſubſtract 3500, and there reſteth 5796, the four Numbers thought upon.

Now becauſe in the figures 9296, the two laſt Numbers are like the two thought upon, to avoid ſuſpicion, bid him add 12, or any Number to it, and then it will not be ſo open: As for example, the 12 being added to 9296, it makes 9308; from which if you ſubſtract 3512, there will remain 5796, the four Figures thought upon, as before,

Two Perſons thinking of two Numbers, the one an even Number, and the other an odd Number, to divine and tell who thought the one, and who thought the Other.

Bid the firſt Man to double his Thought, and the ſecond Man to treble his, then to
add

add both Numbers together. Then bid the one of them cast away half ; which if he can do, the total is even, otherwise odd.

The Total being Even,

1 *Even.* The first Man thought odd,
The second Man even,
The Total being odd ;

2 *Odd.* The first Man thought even,
The second Man thought odd.

Example.

1 *Man.*

2 *Man.*

Thought	15		24
Doubled, is	30	Trebled, is	72
30 and 72 added together, is			102

The Total is even, because half may be cast away.

The total being even, the conclusion is, the first Man thought odd, and the second Man thought even, &c.

1 *Man.*

2 *Man.*

Thought	34	Thought	45
Doubled, is	68	Trebled, is	135
Add 68, and the Total of both is			203

Cast away half. Answer, I cannot.

The Total therefore is odd. The Total being odd, the Conclusion is, the first Man thought Even, the second Man thought odd.

Four Men thinking on four Digit Numbers, (which are from 1 to 9) to tell what the first, second, third and fourth Man thought.

This

This conclusion findeth out any Number thought, under 10000.

Four Persons standing in rank, admit the first to think 8, the second 7, the third 6, and the fourth 5.

Let the first Man double the Number of his thought, and add 5 thereto, then multiply the whole by 5, and add 10 to the product, noting the Total.

Bid the second Man demand of the first Man his Total Number, which being given him, let him add unto the same his Thought, and give the Total to the third Man.

Then bid the third Man to affix or set his Thought by the Number given him; and put it one place towards the right Hand, and give the Total thereof to the fourth Man.

Last of all, bid the fourth Man set his Thought thereby, a place yet to the right Hand, in the first place, and add the Number of 25 unto it, that done, demand of him the Total Number; which being given you, subtract out of it 3525 the Number remaining will discover the four Mens Thoughts.

The Digit on the left Hand sheweth the first Man's Thought, the next Digit towards the right Hand is for the second Man's Thought; the figure in the second place representeth the third Man's Thought, and the figure in the first place giveth the fourth Man's Thought.

Example.

Example.

1. The first Man's Thought 8, which being doubled is 16, and 5 added thereto is 21, which multiplied by 5 is 105. Whereunto add 10, the whole is. 115

2. Secondly, let the second Man, add in 7 (his Thought) it stands thus, 122

3. Let the third Man set his Thought a place to the right hand, thus : 122 6.

A. Let the fourth Man place his Thought a place yet to the right hand thus: 1226. 5

Also bid him add in 25, and it maketh 12290

Demand the Totals, it is 12290

Which being given you, deduct 3525

The remains will be 8765

Ans. The first Man thought 8, the second Man thought 7, the third Man thought 6, the fourth Man 5.

Example

First Man's Thought 8

Doubled, is 16, and 5 added 21, Multiplied by 5, is 105, and 10 added in is 115

Second Man's Thought added in, is 7

The Total is 122

Third and fourth Man's Thought set thereby, 122. 6. 5

25 Added, makes 12290

Substract 3525

Particular Thought, 8. 7. 6. 5.

Of the 4 Men, 1. 2. 3. 4

The End of the Second PART.

ART's



ART'S TREASURY, &c.

PART III.

COOKERY.

To hang Beef.

TAKE a Breast of Beef, cut it in Pieces, and salt it with peter Salt, bay Salt and common Salt. Put it into as much Brine of other Beef as will cover it. Hang it up one Day in the Chimney to dry, then smoak it over Straw till you think it black enough for Use. Boil it afterwards in a Kettle with Hay.

To collar Beef.

Take the thin Flank of Beef, strip off the white Skin; then salt your Beef with a Pound of peter Salt, and two Ounces of sal Prunellæ, and let it lie so three Days. Then wash it with pump Water, and let it drain till it is very dry; then take Cloves, Mace, Ginger and Nutmeg of each Half an Ounce, white Pepper one Ounce, beat them all together
very

very small, and sift them very fine, half a Handful of Bay leaves dried and rubbed to Powder, mix these together, and season your Beef with it; then roll it up, tie it close, and put it into an earthen Pot with a Quart of Claret, paste it up close, and set it in the Oven to be baked with brown Bread.

To make Scots Collops.

Cut very thin Slices of Veal and half fry them in very good fresh Butter; then put in some White-wine, a Bundle of Thyme, a Blade of Mace, a little sliced Nutmeg, an Onion stuck with 2 or 3 Cloves; when it is fried enough thicken the Sauce with Yolks of Eggs, and squeeze in it the Juice of a Lemon, and shake it together.

To pot Partridges.

First lard them with Bacon, then season them very well with Cloves, Mace, Pepper and Salt, two or three Onions, as many Bay-leaves, a little Butter. Cover them close in an earthen Pot, and bake them in the Liquor that a Leg of Beef or Ox-cheek has been baked in, pouring as much of it upon them as will cover them.

To fricassy Rabbits.

Take your Rabbits, cut them in small Pieces, and put them into a Stew-pan with half a Pint of White-wine, a little strong
Broth

Broth and Oyster-liquor ; season it with Pepper and Salt and a little Nutmeg ; let this stew till it is almost enough, then add to it a few sweet Herbs, 3 or 4 Shallots, as many Anchovies. Let them stew all together till it is enough, or very tender ; then put to it the Yolks of 2 or 3 Eggs, beat with a little White-wine and a Piece of Butter ; shake it and toss it well together over a quick Fire and serve it up.

To pot Neats Tongues.

Take salt Peter, mix it with other Salt, and powder your Tongues very well with it ; then lay them into a Pan to take the Brine for a Fortnight, turning them once in 4 Days, then boil them till the Skin will come off ; then put them into an earthen Pot, and cover them with melted Butter. Stop the Pot up close with Paste, and set it into an Oven with household Bread ; when they are baked enough, take them out, put them into a clean Pot, and add to them as much clarified Butter as will cover them.

To stew Carps.

Save the Blood, scale and open them clean, then wash them with Claret and Vinegar, which Claret you must strain and put to them again, with a Quantity of strong Broth seasoned'd with Ginger sliced, Mace, Nutmeg Horse-radish, an Onion stuck with Cloves, Pepper,

Pepper, Salt and Anchovies. Then burn a little fresh Butter black, and put to it; season the Whole to your Palate and stew the Fish till they are tender.

To pot Neats Feet.

When the Neats Feet are very tenderly boil'd, shred them as small as you can, and season them with Cloves, Mace, Cinnamon, Pepper and Salt; then put them into a Pot narrower at the Bottom than the Top; when it is thrust close in, cover it with a Piece of thin Parchment, and tie it very close; then put the Pot into a Kettle of boiling Water, and let it simmer till it becomes a perfect Jelly. When it is cold it will come out by turning the Bottom of the Pot uppermost, and may be eat either with Mustard and Sugar or with elder Vinegar.

To make a white Fricassée of Chickens.

Take a large Piece of Butter and let it boil in the Stew-pan till it leaves bubbling, then put in your Chickens cut small, and let them fry till they are a little brown; then put to them a small Onion, a little Parsly and Thyme tied together, 3 or 4 Cloves, a few Grains of whole Pepper; let these stew together, then add some good thick Cream, a little Salt, and stir it well together, and beat 2 or 3 Yolks of Eggs with 2 or 3 Spoonfuls of Cream, grating a little Nutmeg
into

into it; when your Chickens are tender put in your Eggs, and stir it well together, squeezeing a little Juice of Lemon into your Sauce, and dish it up.

To make forced Meat.

Take a Pound of a Leg of Lamb or Veal, mince it small with a Pound and Halt of beef Suet, and put to it a few sweet Herbs; then add a little grated Bread and 2 Eggs, and season it with Pepper and Salt, Cloves, Mace and Nutmeg; mix them well together, make them into Balls and fry them as you have Occasion.

To collar Pork.

Take a Breast of Pork and bone it; then season it with Pepper and Salt, Cloves, Mace and Nutmegs, and strew on it a Handful of Sage and sweet Herbs cut small. Roll it into an hard Collar, and bind it with Tape, boil it till it is very tender, then take it out and keep it in soufe Drink.

To collar Eels.

Take the largest Eels, and when they are flayed and washed, season them on the Inside with Pepper and Salt, Cloves, Mace, Nutmeg and a few sweet Herbs cut small; then roll them up into hard Collars with the Skins on the Outside of the Eels, and boil them in
Water

Water and Salt with almost half Vinegar, a little whole Pepper, and a few sweet Herbs; when they are very tender, take them off, and keep them in the same Liquor.

To pot Beef.

Take 12 Pounds of a Buttock of Beef, cut it into Slices and beat it with a rolling Pin, then season it with Pepper and an Ounce of salt Peter, Cloves, Mace and Nutmegs and put it into a Pot with about two Pounds of Beef-suet minced and a Pint of Claret; and bake it with household Bread; when it is baked enough, and almost cold, take it out of the Pot and drain it from the Gravy; then break and rub it with your Hands as fine as you can, and put it into little venison Pots; when it has stood almost an Hour in the Oven, add to it as much clarified Butter as will cover it.

To hash a Calf's Head.

Boil the Head till it is tender, cut it in thin Pieces, and put it into a Stew-pan with some strong Broth, half a Pint of White-wine, and a little oyster Liquor, a few Oysters, a Bunch of sweet Herbs, and 3 or 4 Shalots, a little Pepper and Salt, and a Nutmeg cut small; let these stew till it is very tender, and put to it the Yolks of 4 Eggs, well beat with three Anchovies cut small, and a Slice of Butter, shaking it over a quick

a quick Fire till it begins to thicken ; then put it into a Dish with Sippits ; then having 5 or 6 Sheeps Tongues, boiled, pealed and slit in Halves and larded with Bacon, which being fried with some forced Meat Balls and a few thin Slices of Bacon, a few large Sprigs of Parsley and a few bay Leaves, some large Oysters dipped in Butter ; lay the fryed Meat all over the Hash and garnish the Dish with horse Radish scraped, red Cabbage, green Parsley, a Lemon sliced and serve it up.

To pickle Walnuts.

Take green Walnuts before the Shells are grown hard, put them into an earthen Pan and pour scalding hot Water upon them every Day for a Week, till all the Bitterness is gone and the Water not coloured. When this is done and they are cold put them into a stone Pot with a Lay of Dill at the Bottom, then a Lay of Walnuts, then a Lay of Salt, do this till the Pot is full ; then put to them 2 Spoonfulls of whole Pepper, 8 Blades of Mace, 8 Cloves, and 8 or 9 Cloves of Garlick ; and fill up the Pot with the best White-wine Vinegar ; over all put 3 or 4 Spoonfulls of Mustard-seed and a Lay of Dill, then stop it up close, and open it in 2 Months.

To make Sauce for wild Fowls.

Take half a Pint of Claret, a little Gravy and oyster Liquor, 3 or 4 Shallots and a little Nutmeg or Pepper, boil these a quarter of an Hour, and thicken it with a little Flower; then add to it two Anchovies and a Piece of Butter and shake it well together.

Another.

Take fresh Meat of any Sort, the Necks of Fowls, boil them with 2 or 3 Onions; strain off your Liquor and put to it a quarter of a Pint of Claret, a little Nutmeg and 2 Anchovies, thicken it up with a little Flower and Butter.

To pickle Cucumbers.

Lay them in Water and Salt 2 or 3 Days, then make a Pickle with Vinegar, and to every Gallon of Vinegar put an Ounce of long Pepper and as much Ginger, with about 20 Cloves and a good Handful of dill Seeds; let these boil half an Hour and when it is cold put the Cucumbers to it and let them lay in the Pickle a Month or six Weeks. Then boil the Pickle again, adding a little more Vinegar and a little Salt.

To pickle Mushrooms.

Gather them between *Bartholomew Tide* and *Michaelmas* after a good Shower of Rain; clean them and rub them well with a Piece of wet Flannel and throw them into Water; them

then wash them in Water and Vinegar and boil them with some Salt, when boiled put them into a Cullender to drain. Then strew a little Pepper upon them grossly beaten, and put them into a Glass. Then take as much Vinegar as will cover them, and boil in it a quantity of Cloves, Nutmeg, and Ginger, according to the quantity of your Liquor, a little Orange-peel, a few Bay-leaves and Lemon Juice when it is cold put it to the Mushrooms, and tie them down close.

To Pickle Barberries.

Let the Pickle be Water and Salt, with a few of the Berries boiled in it. Strain it out, and when it is cold put the Berries to it.

To make Sauce for Ducks.

Take Lemon Thyme or other Thyme, an Onion shred small, a little Pepper and Salt mixed, and put it into the Ducks Bellies: when they are roasted, pull it out, and mix it with Gravy Sauce, stir in a bit of Butter, and serve it up.

To make a Carrot Pudding

Take six Eggs, a white two penny Loaf grated, half a pound of Butter, milk enough to make it into a stiff Pudding: Butter your Dish very well, and put the rest of the half pound of Butter in little Pieces at the top of the Pudding. Remember Sugar and Nutmeg,

meg, and as much old Carrot grated as Bread;

To make Sauce for Fowl.

Take more Water than Claret, slice an Onion into it, and some Crumbs of stale white Bread, a little whole Pepper, and boil them together till the Onion is tender; then dissolve an Anchovy in it, and a bit of fresh Butter, and beat it together.

To Roast a Hare Tender.

Take the Liver, mince it small, with Nutmeg, Pepper, Onion, an Anchovy, Thyme, Marjoram, Parsley, Winter savory, and young Spinage, and work them up with Butter; put it into the Belly, and sew it close up. Then spit the Hare, and baste it for an Hour or two with Salt and Water, and as it warms pluck the Hair off, and when it is clear off, keep it basting with Butter till it is enough. Then take it up, and mix the Herbs that were in the Belly with thick melted Butter, and serve it up.

To make Alamode Veal or Beef.

Take a Fillet of Veal, and lard it with large Lards of Bacon seasoned with Pepper, Salt and Ginger; then flower it, and brown it in a stew Pan. Then put to it some strong Broth, a bottle of Claret, a bundle of sweet Herbs, an Onion stuck with Cloves, Mace, whole Ginger and Pepper, two or three Bay-
H leaves.

leaves. Cover it up close, and put it into an Oven with white Bread, or stew it over a gentle Fire; when it is done, blow off all the Fat, and you may eat it hot or cold. Beef is to be done in the same manner.

To make a Neat's Tongue Pye.

Half boil, peel and lard your Tongues, and season them with Pepper, Salt, Mace, Cloves and Nutmeg: Lay them in the Crust, and take about a pound of Leg of Veal, mince it small with a little Beef suet, a few sweet Herbs, and two or three Eggs, and season it as you did the Tongues, and make it into little Balls, and lay them upon the Tongues: Lay on also some Cloves, Mace, and good store of Butter, then close up the Pye.

To make minced Pyes.

Take a Neat's Tongue, parboil it, and mince it small, with almost double the quantity of Beef-suet, a little Lemon Peel, and six or eight hard Eggs, and a Pippin or two cut small. Then add as many Currants as the Weight of the Suet, and as many Raisins of the Sun stoned as the Weight of the Meat, minced. Then season it with Cloves, Mace, Nutmeg, Sugar and Salt, with about half a Pint of Sack and the Juice of two Lemons; mix it well together, and fill the Pyes. Put on them candied Lemon Peel, Dates, and dried Citron, and close them up.

To make an Orange Pudding.

Take Flower and Butter of each a Pound, let the Butter be well rubbed into the Flower, and make it into Paste with one Egg ; if that will not wet it enough, put in a little warm Milk, then roll out as much as will cover a Dish. Then take two large Oranges and grate them, half a pound of sweet Butter, and three quarters of a pound of refined Sugar, the Yolks of six Eggs. Beat the Butter, Oranges and Sugar well together in a Mortar, then beat the Eggs, and put them in the Dish, cover it with a thin Paste, and let it bake half an Hour.

A sauce for Pike or Tench.

Take a quarter of a Pint of Claret, as much Water, an Anchovy or two, an Onion, some whole Pepper, Mace, Nutmeg and Ginger, a piece of Horse-radish, and Lemon-Peel. Let it boil a good while over the Fire, beat two or three Yolks of Eggs with Gravy and the Juice of a Lemon, and a little Salt ; add a little Catchup if you have any, and as much Butter as you please ; then stir them together over the Fire till it is thick.

To make a Pudding.

Take a Penny-loaf and half grated, Eight Eggs, a Pint of Cream, a Nutmeg, a quar-

ter of a pound of Sugar, a Handful of Flower, a piece of Suet of the bigness of an Egg. Let it boil an Hour; melt Butter and Sugar, and pour over it; you may put in a quarter of a pound of Raisins of the Sun, if you please.

A French Fricassée.

Take a quarter of a pound of Butter, melt it and clear it in a stew Pan. Then take three Chickens, cut them in Pieces, and stew them in the Butter till they are half enough. Then put as much Water as will cover them, six Cloves, some whole Pepper, a little bunch of Thyme and Parsly; let this boil till you have just enough for Sauce. Then take the Yolks of three Eggs and beat them, stir it over the Fire, till it is very thick.

A Rambouillio.

Take half a Dozen of Pigeons, raise the the Skin from the Flesh: Then make a Stuffing with two parts Sorrel and one part Parsley, a little Lettuce and Spinage cut small, melt Butter in a Frying-pan, strow in the Herbs, and mingle with them Eight or Nine Yolks and Whites of Eggs; stew the Herbs and Eggs a while till all be ready, stirring them with a Spoon. Then put in some Nutmeg, thrust this Stuffing between the Skin and Flesh, and some in the Bellies of the Pigeons. Put all in a Stew-pan,
with

with as much Water as will cover them, adding more Butter, and stewing them over a gentle Fire, often turning them. Keep a little of the Stuffing to put into the Pan when they are almost ready. Put them in the Dish with the Bellies upwards. Small Chickens may be done in the same manner.

To Pickle a Leg of Pork for drying.

Take Pump water and Peter-salt, make a Pickle that will bear an Egg, put the Pork into it; when it hath lain three or four Days, take it out and boil the Pickle very well, scum it, and when it is cold, put the Pork in again, and let it lie in three Weeks. Then take it out and dry it well with a Cloth, and hang it in the Chimney where Wood is continually Burning. In a month it will be Dry.

To Hash a Calves-head.

Parboil the Head, and slice it into a Stew-pan; put in a quart of White-wine and a quart of Oysters, some Lambs-stones and Sweet-breads, a sliced Nutmeg, some Cloves and Anchovies, a little Lemon, Thyme, two Onions, some Artichoke-bottoms, Forc'd Meat-balls, a handful of Capers, the Brains, some slices of Bacon and sippets, and serve it up.

To make an Orange Tart.

Take the Juice of four Oranges, pare one of them as thin as you can, pound the Rind very well in a Mortar. Take the Yolks of six Eggs, three Whites, beat them almost an Hour. Then beat a pound of Sugar very fine, mix the Rind of the Oranges and Juice together, as you are beating your Eggs; put in the Juice and Sugar by degrees, till you have mixed it very well. Put it in a Pewter-dish that is very deep: Then cover it with a good Puff-paste, and bake it half an Hour or less. Ice it with the white of an Egg and Sugar well beaten together.

To Collar Eeles.

Take them and slit them down the Back, season them with Pepper, Salt, and Nutmegs very well, and roll them up very hard with Oysters, tying them in a Cloth or Fillet, and boil them in a Pot with Claret and Water. Eat them with Vinegar.

A Cowslip Pudding.

Take the Cowslips chop'd small, and let the Bread be steep'd in Milk; then put in your Eggs with a little Sugar and Rose-water. Put it into a Butter-dish and let it boil; pour over it, when boil'd, some melted Butter and Rose-water.

Calves-foot Pudding.

Take a Calves-foot chop'd very small, a handful or two of grated Bread, and season the Meat with Nutmeg, Mace, Cloves, and Sugar as much as will make it sweet, three Eggs, a little Cream and Currants.

To make a Tansey.

Take 22 Eggs, 12 Whites, half a white Loaf grated, a Pint of Cream, half a Nutmeg grated, as much sugar as will sweeten it well; take Spinage a good Quantity, and as much Tansey as will give it a Taste. Juice them and strain them, and put the Juice to the rest; then put them all into a silver Bason, and set it over a clear charcoal Fire; keep it stirring till it is very thick, then butter a Dish the Bigness you would have your Tansey, set it over a chaffing Dish of Coals, and as the Whey rises, take it off with a Spoon; then turn it on a pie Plate, and when it is hardened serve it up.

To stew Mushrooms.

Boil them in their own Liquor and some Salt, then stew them with Water and chop'd Parsley, a little Butter, a Blade of Mace, some Lemon, and Crumbs of Bread. Make what haste you can to peel them into Water, or else they will turn black.

To dry Neats Tongues.

Take the largest Tongues, wipe them very clean, but not wash them; rub them well with salt Peter, and put them in a close covered wooden Vessel; let them lie a Fort-night till they are stiff; then hang them in a Chimney with wood Smoak; when you perceive they are so dry that there is no Moisture in them, take them down, and hang them in a dry Place; boil them as tender as ordinary Tongues 2 or 3 Days before you use them.

To pickle Ash Keys, Elder Buds, Broom Buds, green Pease, and French Beans.

Lay them in fair Water and Salt a Week or nine Days, then take them out, and green them in fair Water; then make a Pickle of half Wine and half Vinegar, and season it with what Spice you please; when they are cold, put them together, and keep them for Use.

To make an Almond Pudding.

Beat a Pound of blanched Almonds in a stone Mortar very fine, with Rose-water and Sugar; put to them half a Pint of Cream, half an Ounce of Mace and Nutmeg, 2 Pounds of the best beef Suet, some Marrow, one Penny Loaf grated and sifted, 8 Eggs and four Whites, some Salt, then put it into a Pewter-dish and bake it.

To

To make a Cake.

Take a Peck of fine Flower, 3 Pounds of Butter, half a Pint of Cream ; melt the Butter and Cream gently over the Fire ; then strain in 24 Yolks of Eggs and 15 Whites ; let them be well beaten with a little Salt, half a Pint of Rose-water musked ; then stir in a Pint of good ale Yeast, put a Pound of white Sugar beaten and sifted into your Flower, an Ounce of Mace and Nutmeg, with a few Cloves. Then put in your wetting, and stir it well together. Throw a little Flower over it, and let it stand to rise before the Fire covered with Paper ; then take 10 Pounds of Currants clean washed in warm Water, and dried with a Cloth, then warmed in a Dish over the Fire, and put warm to the Paste ; then butter your Hoop and Papers, and let it stand 2 Hours in the Oven.

To make a Marrow Pudding.

Lay some Raisins plumped at the Bottom of the Dish, and then some *Naples* Biscuits cut in Pieces, and some little Mackaroons, slice a Date, and lay some whole Mace here and there, some more Raisins and Currants plumped. Grate a whole Nutmeg over all, put in some preserved Orange, Citron, and Lemon Peel ; shred some Suet very small, and put here and there some Marrow ; make a Custard with 8 Eggs, 6 Whites, a Quart
 11 5 of

of Cream, a little Rose-water and Canary ; sweeten it at Discretion ; put in 3 Parts of it before you put it in the Oven, and the rest when it goes in.

To roast Lobsters.

Take two great Lobsters alive, wash them clean, and stop the Holes as you would to boil them, tie them fast to a Spit, the Insides together, baste them with Water and Salt very often, till they are ready, which you will find by the Redness of them ; then have ready some Oysters stewed and cut small, put them into a Dish with melted Butter beaten thick, then take three or four Spoonfuls of the Liquor the Oysters were stewed in, and dissolve in it two Anchovies, then put the Liquor into the melted Butter, and put it into the Dish where the Lobsters shall lie ; then take the Lobsters and crack the Shells that they may be easy to open, d serve them in.

To make a Hare-pye.

Parboil two Hares, and take the Flesh from the Bones, mince it small, and beat it in a Mortar, then sawce it in Wine and Vinegar, as you would do Red Deer ; lap all this about the Chine of one Hare, and so it will seem but one ; lard it well, and put it into your Pye with good Store of Butter,

Butter, season it with Salt and Spice, when you beat it ; when it is baked, put in some melted Butter to fill it up.

To dry Beef as they do in Holland.

Take of the Buttock-beef of a fat Ox, salt it well with Bay-salt four or five Days, then hang it a draining one Day, then sew it up in a thin Cloth, and hang it up in a Chimney to dry ; when you would eat any of it, boil it very tender ; and slice it so thin, that you may almost see through it, and eat it with a Sallet.

To make Polonia Sausages.

Take Pork, and pick it clean from the Bones and Skin, let it not be too fat, mince it well, and beat it in a Mortar very fine ; then weigh it, and to every Pound of Meat, put one Ounce of Salt ; then take Pepper, Cloves, Mace, Ginger, Nutmegs and Cinnamon, of each a like Quantity ; being mixed together, allow one Spoonful of this to a Pound of Meat ; then take Anniseeds, Carraway-seeds, Coriander-seeds, of each a like Quantity, mixed together and beaten ; allow half a Spoonful of these to one Pound of Meat ; first season your Meat with the Salt, kneading it in very well, and so let it lie one Day and one Night ; then put in your Spices, and knead them in very well.

well with a little Muscadine, kneading it Morning and Evening with a little more Muscadine two Days together ; your Guts must now be ready, having before lain in Salt and Water two Days, then in Sack and Must two Days more ; then fill your Guts with the Meat, and smoak them one Night in the Chimney ; then hang them where they may have the Warmth of the Fire ; when they are dry take them down, and keep them in a Barrel of Wood-ashes sifted, keep them as long in as you would not have them too dry ; take them down, and put them into so much Oil as will cover them ; after they have been smoaken a Night or two (they will keep in Oil seven Years) when you would eat of them, boil them very well, and slice them thin, and eat them cold.

To make an Almond Tart.

Take half a Pound of sweet Almonds blanched, and beaten with Rose-water ; then boil a Quart of Cream, and when it is cold, take the Yolks of eight Eggs well beaten, and mix them with your Cream and Almonds ; season it with Rose-water, Nutmeg and Sugar, Cinnamon, Cloves and Mace ; then bake it in a Dish with puff Paste ; this, if you add some grated Bread, Fruit, and Marrow, is a very fine Pudding.

To make an Amalet.

Take ten Eggs, and more than half the Whites, beat them very well, and put in in a Spoonful or two of Cream, then heat some Butter in your frying Pan, and when it is hot, put in your Eggs and stir them a little, then fry them till you find they are enough; and a little before you put them out of the Pan, turn both the Sides over, that they may meet in the Middle, and lay it the Bottom upwards in the Dish; serve it in with Verjuice, Butter and Sugar.

To stew Pigeons.

Stew them in White wine and Water; put in whole Mace, whole Pepper and Salt, with some Artichoke Bottoms tenderly boiled; when they are enough, put in some Butter, and serve them in.

To pickle Oysters.

Take your great Oysters, and save the Liquor that comes from them, strain it into an earthen Pipkin, put to it some White-wine and White-wine Vinegar, whole Pepper, whole Mace, sliced Ginger, Cloves, and Bay-leaves, with a little Salt; when it hath boiled a little put in your Oysters, and let them boil two or three Walmes; then take them up, and boil your Liquor a little longer, and when it is cold put in your Oysters, and barrel them up, or keep them in Gally-pots close stopp'd.

To

To stew Oysters.

Take three Pints of Oysters with their Liquor, stew them with a Blade of Mace and a Sprig of Thyme ; when they are enough, take the Liquor from them, and lay them before the Fire to dry ; then take the Yolks of Eggs well beaten, put to them a Piece of Butter, some Juice of Lemon and Sugar ; thicken it over the Fire, and pour it over the Oysters, and so serve them in.

To make a Gooseberry-fool.

Take a Pint of Gooseberries, or thereabouts, scald them very tender, then pour the Water from them, and with the Back of a Spoon bruise your Gooseberries very fine ; then take a Pint and a half of sweet Cream, the Yolks and Whites of three Eggs well beaten, put them to your Gooseberries with one Nutmeg quartered, and two or three Spoonfuls of Rose-water, with as much Sugar as you think fit ; mingle all these together and set them on a slow Fire, keep it stirring that it may not turn : When you perceive it to be of a good thickness, pour it out, and when it is cold, serve it in.

To make a Fricassé of Veal.

Cut your Meat in thin Slices, beat it well with a rolling Pin, and season it with Nutmegs, Lemon and Thyme, fry it slightly

in

in the Pan, beat two Eggs, and one spoonful of Verjuice, and put it into the Pan, and stir it together, and dish it.

To keep Asparagus all the Year.

Parboil them a very little, and put them into clarified Butter, cover them with it in a Pan, the Butter being cold, tie it over with Leather, and about a Month after refresh the Butter, melt it and put it on them again, then set them under Ground, being covered with a Leather.

CONFECTIONARY.

To make clear Cakes of any Fruit.

TAKE Currants strip them from the Stalks, and put them into a stone Pot; set your Pot in a Kettle of boiling Water, let it stand an Hour; take it out and let the Juice run thro' a Sieve into a clean Pot. To every Pint of Juice take a Pound or more of Sugar; wet it with a little Water, and let it boil till it candies; then take it off the Fire and put in your Juice, and set it on the Fire, again; keep it stirring, and be sure it does not boil again. Put it in jelly Glasses, and when is cold put it in your Stove, and keep a moderate Fire within; when they are ready to turn, sift sugar on them, and let them stand till

till you think them ready to put in Boxes
Other Fruits may be ordered in the same
Manner.

To preserve Grapes green.

Take a Pound of the best ripe *Muskadine* Grapes, pick and stone them; take a Pound of the best refined Sugar finely beaten. As you peel the Grapes lay them in the Sugar, and when it is melted set them on the Fire, and let them boil pretty fast for a little while; then shake them, and set them on the Fire again; this do once or twice till they are clear. Take care they boil not too fast, lest they lose their Taste and Beauty. Other Fruits may be preserved in the same Manner.

To dry Plums and other Fruit.

Take a Pound of Sugar, and better than a Pint of Water, make it into a Syrup; then take two Pounds of Plums, stone them and lay them one by one in the Syrup after it hath been some Time off the Fire, making them scalding hot; then cover them with a Dish till they are cold; warm them thus for 2 or 3 Times, till you find them tender, and to have lost their natural Sourness; when they have been 3 Days in your Syrup, take them out, and lay them upon Sieves in an Oven not too hot, often turning them; when they are almost dried, rub them with a Cloth dipped in hot Water,
and

and put them again into the Oven till they are dry.

To make Chocolate Biscuits.

Grate a Quantity of Chocolate, then take some Sugar beaten and sifted, the White of one Egg; mix all these together; roll it on the Table, cut it in diamond Cuts, and lay it on your Paper; put some Juice of Lemon to it, when you make them up and beat it in a Mortar; then bake them in a cool Oven: You need not beat them in a Mortar unless you please.

To preserve Oranges or Lemons.

Take Oranges and pare them, cut a Hole in the Place where the Stalk grows, pick all the Seeds out, and lay them in Water for 3 Days, shifting the Water every Day; then weigh them, and to every Pound of Oranges allow a Pound and half of Sugar; then boil your Oranges in several Waters till they are tender, and the Water have no Bitterness; then make your Syrup with such a Quantity of Water as is requisite to wet the Oranges; when the Syrup boils and is well scummed, put in your Oranges, and let them boil till they are very tender, and the Syrup well thickened; let them stand in the Syrup 2 or 3 Days. Then take out the Oranges, and boil the Syrup again till it is very thick; then put in your
Oranges

Oranges and Syrup again that cometh from them at first, and put them up.

To make Hartshorn Jelly.

Take half a Pound of Shavings of Hartshorn, boil it in 2 Quarts of Spring-water to a Pint and half; strain it and put to it the Juice of 6 Lemons, as much fine Sugar as will sweeten it; stir it well together, and set it over the Fire; when it is ready to boil, take it off, and put it into Glasses, and keep it for Use.

To Candy Orange, or Lemon Peel.

Take the Peels of a quarter of a Hundred of Oranges, shift them in four or five Waters, boil them till they are tender. Then take ~~six~~ pounds of Sugar, a good quantity of Water, the white of an Egg, whisk the Water and Egg together upon the Fire, then put in the Sugar; let it boil apace for a good while, then scum it well, and strain it thro' a Flannel-bag. Then put in the Orange-peel, tie down the Pot till next Day, then boil the Syrup and Orange Peel together, till it is very tender and clear. Then put it into the Pot again, and tie it down close. When you Candy it, boil the Syrup very thick, put in your Peel, then take it out, and lay it in Plates to Dry.

To make Marmalade of Quinces white.

Take as much double refined Sugar as you are to use, put a good part of it into your Pan. Then pare the Quinces as fast as you can, weigh them and cut them in quarters, strow Sugar on them that they lose not their Colour, taking to every pound of Sugar a pound and a quarter of Quinces. Then according to the quantity, stamp some Quinces and strain the Juice into the Sugar. Then set it on a quick Fire and let it boil as fast as possible ; put in the rest of the Sugar by degrees, and a little before that is ready to take up, strain in a little more Juice. Note one Pound of Sugar is enough for one Pound of Quince first, and if they be large a Pound and a quarter ; all the Art is to do it quick and stir it carefully, for if they lie any Time pared they lose their Colour.

To preserve Apricots, Plums and Almonds.

Gather the Fruit before it is stoned, and put it into a Skillet of warm Water, cover it and keep it in a temperate Heat till it is green ; to every Pound of Fruit put a Pound of Sugar and a Pint of Water made into a Syrup ; put the Fruit into it, and let it boil a little, set it by till the next Morning, and then you may boil it up.

*To**To*

To make Almond Cakes.

Take 2 Ounces of Almonds, half a Pound of double refined Sugar sifted very fine, the Whites of 2 Eggs; beat all these with a little Rose-water in a stone Mortar to a Paste; then make it into Cakes and bake them.

To make Lemon Cakes.

Take the Juice of a Lemon and scrape into it so much of the yellow Rind as will make it very thick, and cover it close; let it stand 24 Hours, then strain it thro' a Tiffany very hard, and take a Pound of pure fine Sugar, wet it with strong Spirit of Wine; when it is boiled to Candy pour in the Juice of Lemon, stir it well together, and drop it upon sleeked Paper; when they are hard, take them and keep them very dry.

To make Almond Butter.

Take a Quart of thick Cream, put it into a Skillet, then take the Yolk of 12 Eggs, beat them well, and strain them into the Cream. Set them on a slow Fire, and keep it stirring; when it is all Curd, that you may perceive the Whey, take it off the Fire, and let it run thro' a Strainer, and when it is cold, take half a Pound of Almonds blanch'd, and beat them very well with Rose-water; strain them out and take the Juice, and put it into your Almond Butter; then put in
double

double refined Sugar finely sifted, put it into a Mortar, beat it well, and serve it up.

To make Wormwood Cakes.

Take Loaf-sugar and sift it, Gum-Arabick steeped in Rose-water; then take the Spirit of Wormwood, and some of the Gum-water, and mix it with the Sugar; roll it thin, and cut them into what Shape you please, and lay them upon Paper to dry.

To make Jelly of Currants.

Take what Quantity you please, and pick them from the Stalks, weigh your Fruit, and to each Pound of Fruit allow a Pound of Sugar; when your Sugar is clarified, put in the Fruit, and let it boil till it burst; then strain it thro' a Flannel-bag; then put it again into your Pan, and let it boil to the Consistence of a Jelly; put it into Glasses, and keep it in a dry Place.

To make Wines and cordial Waters.

To make Cowslip Wine.

TO three Gallons of Water put six Pounds of Sugar, boil them together half an Hour, and as the Scum rises take it off; then pour it out and let it cool; when it is almost cold, add to it a Spoonful of Yeast and

and six Ounces of Syrup of Lemons; beat them well together, and put them to the Liquor, brewing it up and down; then put 4 Gallons of picked Cowslips bruised, and let it work together 2 or 3 Days; strain it out, and put it into a Cask that will just hold it, and when it has done working, stop it up close ten Days; then bottle it, putting a Lump of Sugar in each Bottle, and keep it for Use.

To make Cherry Wine.

Take to a Quart of Brandy, one Pound of *Morelli* Cherries, and 3 quarters of a Pound of double refined Sugar; put it into Bottles, and set it in a hot Bed for 9 or 10 Days uncork'd, but tied down with a Bladder, that it may work; when you take it from the hot Bed, cork it down and set it a Cellar; the longer you keep it the better.

To make Raspberry Wine.

Take to every Gallon of Raspberries, a Pint of small Aqua Vitæ, set it in an Oven after the Bread is drawn, for 2 or 3 Hours; then strain out the Juice, and to every Quart of Juice put half a Pound of Sugar, and 2 Quarts of the best Sack; let them run thro' a jelly Bag, then put it into stone Bottles, and let it stand close corked up for 2 or 3 Days; then strain it once more, and Bottle it up.

To

To make Aqua Mirabilis.

Take Cloves, Galangal, Cubebs, Mace, Cardamoms, Nutmegs, Ginger, of each one Drachm, Juice of Celandine one Pint, of the best Brandy 2 Quarts; let these stand 24 Hours, then distil it.

Dr. Stevens's Water.

Take of Cinnamon, Ginger, Galangals, Cloves, Nutmeg, Grains of Paradise, Seeds of Anise, Fennel and Carraway, of each one Drachm; the Herbs Thyme, Mother of Thyme, Mint, Sage, penny Royal, Pellitory, of the Wall, rosemary Flowers, red Roses, Camomile, Marjoran, Lavender, of each one Handful; infuse them twelve Hours in 12 Prints of *Gascoign* Wine; then distil it in an Alembick.

To make Elder Wine.

Take the same Quantity of Water and Juice of Elder-berries, and put as much Sugar in it that it will bear an Egg, and then boil it for half an Hour; work it like Beer, then tun it up; after working, stop it up close with a Lemon or 2 in it; in two Months it will be fine to bottle.

To make July Flower Wine.

Take six Pounds of Sugar to three Gallons of Spring-water, as it boils scum it, then take it off the Fire, and put half a Peck of
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of *July* Flowers pick'd and cut, and let it stand 24 Hours; then strain it out, and put it into a Vessel with a little Yeast, and when it has stood a Week or ten Days bottle it up.

To make Ratafia.

To a Quart of Brandy, put a hundred of Apricot Kernels, a quarter of a Pound of white Sugar-candy, a little Cinnamon sliced, or other Spice; let it stand six Weeks in the Sun, then press it out, and let it run thro' a jelly Bag, and bottle it up.

To make Orange Water.

Take threescore Oranges, 2 Quarts of Brandy, 2 Quarts of White-wine, and 2 Quarts of Canary, and distil them together.

To make Raspberry or Currant-wine.

Take your Raspberries or Currants pickt and bruised, put to every three Pints one quart of Spring-water, let them stand Twenty-four Hours, then strain the Liquor from them thro' a Hair-sieve. Put it into a Firkin, and allow to every quart of Water, a pound of good Sugar, and keep it close stopp'd for three Weeks. Then Bottle it, and at three Months end you may drink it. Put to a dozen Bottles a quart of Malaga; when you bottle it put a little Sugar in every bottle.

To

To make Bitter-wine.

Put to a quart of Wine, three Drachms of Gentian, three of Orris Root, half a handful of Centaury-tops, a little Wormwood, and some Orange peel.

To make Mead.

Take a quart of Honey and four quarts of Water, boil them together as long as any scum will rise ; scum it and put a good deal of sliced Ginger in, and boil it a little longer, in all an Hour ; when it is cold put it in a Pot with a Spiggot, and add Yeast to it as for Beer ; when it has done working, bottle it up with some Raisins and Lemon-peel, and keep it in Sand ; at a Fortnight old you may drink it.

To make Wine.

Gather your Grapes very ripe, pick and bruise them well with your Hands in a Tub ; let them stand 2 Days to work, then press them off, and put them in the Vessel, and let them stand unstopt till they have done working, then close it up.

To make Surfeit Water.

Take a Gallon of Aqua-vitæ, a pint of Damask Rose-water, half a pint of Poppy-water, and a pound of Loaf Sugar. Put these into an Earthen Pot, and when the Sugar

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gar is dissolved, put into it a Pound and half of Raisins of the Sun stoned, an Ounce of Cinnamon, a quarter of a pound of Dates stoned, or for want of them some Figs, an Ounce of Cloves, an Ounce of Aniseeds, two sliced Nutmegs, a quarter of an Ounce of Liquorice: Let all these steep close covered some Days, stirring them well once a Day. Then put into it 3 or 4 sprigs of Balm, and as much Angelica, and 3 handfuls of Scarlet Poppy-flowers; after this let it stand 2 Days more, and then strain it thro' a Jelly Bag. When the Surfeit Water is taken off, put all the Ingredients into a Butter-pot, and put a Gallon of Ale to them, and what Cordial Herbs you please; let it stand a Day and a Night and then distil it in a Cold Still.

To make Raisin Wine.

To every five pound of Fruit stoned and cut to pieces, allow a Gallon of Water. Boil it well, and strain the Liquor from the Fruit, then add Yeast to it before it is quite cold and let it work. Tun it up, and when it has done working, stop it up close; when it is fine, draw it off into Bottles for use.

To make Almond Gingerbread.

Take a little Gum-Dragon, and lay it in steep in Rose-water one Night; then take half a Pound of Jordan Almonds blanched, and beaten with a little Rose-water, wherein

wherein the Gum-Dragon hath lain; then take almost half a Pound of sugar finely searced, one Ounce of Ginger, one Ounce of Cinnamon; beat these altogether with Rose-water, then work it into a Paste, so print it, and dry it in some warm Place, as a Stove or Oven.

To preserve Oranges and Lemons, that they shall have a Rock-candy on them in the Syrup.

Take your Oranges or Lemons, and cut them in halves; or if you will do them whole, then cut a little Hole in the Bottom, so that you may take out all the Meat; lay them in Water nine Days, changing the Water twice every Day; then boil them in several Waters, till a Straw will run through them; then take to every Pound of Oranges or Lemons a Pound of fine Sugar, and a Quart of Water; make your Syrup, and let the Oranges boil a while in it, then set them by for five or six Days in their Syrup; then to every Pound of Oranges take a Pound more of Sugar, and put it into the Syrup, and boil the Oranges till they are very clear; then take the Oranges out, and boil your Syrup almost to a Candy.

To Candy Eringo Roots.

Take the Roots new gathered, without knots or joints, then wash them clean, and
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put them in boiling Water, and let them boil very tender; then wash them in two or three Waters, dry 'em in a Cloth, slit 'em, then breade them in breads as you would have 'em, or twist 'em; then take twice their weight in fine Sugar, take half that Sugar, and to every pound of Sugar, one quarter of a pint of Rose-water, and as much fair Water, make thereof a Syrup, then put the Roots therein, and when they are tender and clear, wet the rest of the Sugar with Rose-water, and boil it to a candy height; then put in the Roots, boil them, and shake them, and when you have shaken them up and down till they are cold and dry, lay them on Papers or Plates till they are thoroughly dry, so put them into Boxes: thus you may candy Oranges, or Lemmons, or Citrons, or Lettice-Stalks.

To make Marmalade of Apricocks.

Take the ripest, stone them, and pare them, and beat them in a Mortar, then boil them in a Dish over a Chaffing-dish of Coals, till they are somewhat dry, then take their weight in fine Sugar, and boil it to a Candy-height with some Rose-water, then put in your pulp of Apricocks, and boil them together till it will come from the Bottom of the Skillet, stirring it alway for fear it burn.

To make Worm wood Water.

Take four Ounces of Anniseeds, four Ounces of Liquorish scraped, bruise them well, with two Ounces of Nutmegs ; add to them a good handfull of Worm-wood, a Root of Angelica, steep them in three Gallons of Sack-Lee's and strong Ale twelve Hours, then distil them in an Alembick.

To make Marmalade of Damsons.

Take two pound of Damsons, and one pound of Pippins pared and cut in pieces, bake them in an Oven, with a little sliced Ginger ; when they are tender, pour them into a Colander, and let the Syrup drop from them ; then strain them, and take as much Sugar as the Pulp weighs, boil it to a Candy height, then put in the pulp, and boil it till it comes from the bottom of the Skillet.

To dry old Pippins.

Pare them, and bore a hole through them with a little Knife or Piercer ; and cut some of them in halves, take out the Cores of them as you cut them ; then put them into a Syrup of Sugar and Water, as much as will cover them in a broad Preserving-pan ; let

them boil as fast as may be, taking them some times from the Fire, and scumming them clean : When you perceive your Syrup very thick, and your Apples clear, then take them up, and set them into a warm Oven till the next Morning ; then turn them, and put them in again : when they are dry, put them into Boxes : if you please to chrystal some of them, put them into the Candy-pot but one Night, and they will look like Crystal.

To Preserve Medlars.

Take them at their full growth, and pare them as thin as you can, prick them with your Knife, and parboil 'em reasonably tender ; then dry them with a cloth, and put them into as much clarified Sugar as will cover them ; let them boil leisurely, turning them and scumming them till they have well taken the Sugar ; then put them into an earthen Pot, and let them stand till the next Day, then warm them again half an Hour, then take them up, and set them a dropping ; then put into that Syrup half a Pint of Apple-water ; I mean, Water wherein Apples have been boiled, and a quarter of a pound of fresh Sugar : When it will Jelly, put it to the Medlars in a Gally-pot or Glafs.



To Preserve Oranges in Jelly.

Take the thickest rin'd Oranges, pare them very thin, lay them in Water three or four Days, shifting them every Day : then boil them in several Waters till a straw will run through them, then let them lie in a Pan of Water all Night, then dry them gently in a Cloth, then take to every pound of Oranges, one pound and a half of Sugar, and a Pint of Water, and make thereof a Syrup ; then put in your Oranges, and boil them till you see they are very clear, then put in your Oranges into a sieve that they may drain ; and put for every pound of Oranges one quarter of a Pint of Water (wherein sliced Pippins have been boiled) into your Syrup, and to every quarter of a Pint of that Water, add a quarter of a pound of fresh Sugar ; boil these together, and it will be a quaking Jelly.

To dry Plumbs naturally.

Take any sort of Plumbs, and prick them, and put them into the bottom of a Wooden Sieve, dust the Sieve with Flower of Malt, to keep them from sticking, then put them into a warm Oven, and let them stand all Night ; the next Morning turn them, wash the Sieve, and dry it again, dust it as before. and so dry them in a warm Oven, three or four times ; till you may handle them, then

put them in an Earthen Platter ; and when they are dry, Box them up, and keep them dry.

To make the Plague-water.

Take Rosemary, red Balm, Burrage, Angelica, Carduus, Celandine, Dragon, Featherfew, Worm-wood, Penny-royal, Ellecampane-roots, Mug-wort, Bural, Tormential, Agrimony, Sage, Sorrel, of each of these one handful, weighed Weight for Weight, put all these in an earthen Pot, with four quarts of White-wine ; cover them close, and let them stand Eight or Nine Days in a cool Cellar, then distil it in a Glass Still.

*To make Orange, Lemon, or Citron
Chips.*

Take the thin Chips of either of these, and boil them in several Waters till they be very tender, then put them into cold Water a while, then strew good store of beaten Sugar on them in a Dish, or such like, and boil them, stirring them till the Sugar comes to candy ; then put them out, and open them one by one, and lay them on Papers to dry.

To make Chips of any Fruit.

Take your preserved Fruit, and drain it from the Syrup, then slice it in thin Chips, and boil a little Sugar to a Candy-height ;
then

then put in your Chips of Fruit, and boil them a little, then lay them out to dry.

To make Jelly of Quinces.

Take your Quinces, pare them, and core them, cut them in quarters, then take a new Earthen-pot, which will hold a Gallon, with a narrow Mouth, put in three or four handfuls of the Cores in the bottom, then the Quinces, so paste it up and set it into the Oven with household Bread ; then run them through a bag of boulting stuff, with as much speed as may be, and wring it between two Trenchers so long as it will run clean from dregs ; to every pound of Liquor, take a pound of fine Sugar ; put your Sugar into your Liquor, and let it stand till it be dissolved, then set it upon Embers till the scum arise, then scum it well, and put for every pound of Jelly, one Spoonful of Rose-water ; then boil it, and keep it stirring till it will Jelly.

To make a Sack Posset.

Take two quarts of Cream, boil it with Nutmegs, Cinnamon and Mace, then take twelve Eggs and beat them well, and strain them ; then take your Cream off the Fire, and put in your Eggs, and as much Sugar as you shall think fit, stir them very well ; then set them on the Fire till it be ready to boil ; then take it off and stir it,

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till

till it be half cold, then put in your Sack warmed, and set it on the Fire again, and put your Spoon to the bottom ; and when it begins to rise in great flakes, then take it off, put it into such Basons as you will have it put in.

To make Orange Marmalade.

Take of your best coloured Oranges, and lay them in Water nine Days, shifting them every Day ; then chip them very thin, and cut them in halves, take out all the Meat, then boil them in several Waters, till a Straw will run thorough them ; then lay them on a clean Cloth till they are cold, then pick them clean from speckles and strings ; then take three quarters of a pound of Oranges, and a quarter of a pound of Pippins pared and cored, and cut in quarters, and boiled in fair Water ; then take a pound of Sugar, and half a Pint of Water, boil it, and scum it ; cut your Oranges like Dice, and put them into your Syrup, and Pippins ; then take some Orange Chips, shred very small, and put them in, boil all these together, and stir them always for fear they burn ; when it is almost enough, which you may perceive by the clearness, put in the Juice of two Oranges, and a little Lemon, then boil it a while longer, and when you think it is enough, put it up,

To

To make good Almond Milk.

Blanch Jordan Almonds, and beat them fine with a little Rose-water, to keep it from Oiling; then strain them often with fair Water, wherein hath been boiled Violet Leaves and sliced Dates. When your Almonds are strained, take the Dates and put to it, with some Mace, Sugar and Salt, and heat it a little, and so drink it.

To make red Marmalade of Quinces.

Weigh your Quinces, and pare them, cut them in quarters, and core them, keep them in cold Water; then take their Weight in Sugar, and a little Water, and boil it and scum it; then put in pour Quinces, and set it on a slow Fire, close covered; when you see they be of a good Colour, uncover them, and boil them up quick, till the Syrup Jelly; then put it into Glasses.

To make Cakes of Pistachoes.

Take half a Pound of blanch'd Almonds, and half a pound of Pistachoes, and a quarter of a pound of Pine-apple-seeds; beat all these into a perfect Paste with a little Rose-water, that you may roll it out like March-pane; then fashion it upon Pie-plates like Mackarooms; you must beat some Sugar amongst them, lay them on Wafer-sheets, and prick them with whole Pistachoes;

choes ; then with a Feather Ice them over with Rose-water and Sugar, and the white of an Egg, and Bake them in an Oven not too hot ; then lay on some Leaf-gold.

To make a Mint-water.

Take Mint, and distil it in an ordinary Still ; and when you have drawn a quart, take Hart-mint, and stamp it in a Mortar, and strain it, and then put a quart of that Juice to your Water ; then distil them both together again, and put into the Glass in which it runs, one Ounce of white Sugar-candy, and half an Ounce of Powder of Amber, beaten and searced : This comforteth the Stomach, and stayeth Vomiting, and is good against Wind.

P H Y S I C K.

To give Ease in the Pains of the Stone, even that of the Bladder

TAKE the transparent *Sparr* that grows upon the *Veins* of *Lead-Ore*, and having reduc'd it to fine Powder, give from half a Dram to a whole Dram of it at a time, in a moderate Draught of some convenient Vehicle. *N. B.* Though there be (at least in most of our English Mines) two Teguments, as it were, of the Veins of Lead,

Lead, that grow close together ; yet that which the Diggers name *Cawek*, which is white and opacous, is not the Medicine I mean, but the Transparent, or at least Semi-Diaphanous ; which easily breaks into smooth Fragments, and in the Fire cleaves into several pieces, that are wont to be smooth, and prettily shap'd.

For Agues.

Take Salt of Card. *Benedict.* and Salt of Wormwood ana 15 Grains. Tartar Vitriolate half a Scruple ; mix them, and give them in a few Spoonfuls of Rhenish-wine, or of some other convenient Vehicle, either before the Fit, or at some other time when the Stomach is empty.

An Amulet against the Cramp.

Take the Root of *Mechoacan*, and having reduc'd it to Powder, fill with this Powder a little square Bag or Sacket of Sarcenet, or some such slight stuff ; which Bag is to be about three Inches square, and to be hung by a string about the Patient's Neck, so as that it may reach to the Pit of the Stomach, and immediately touch the Skin.

For Stanching of Blood, especially in Wounds.

Take those round Mushrooms that Botanists call *Crepitus Lupi* (in English *Puff-balls*)

balls) when they are full ripe (which is in Autumn) and breaking them warily, save carefully the Powder that will fly up, and the rest that remains in their Cavities ; and strew this Powder all over the part affected, binding it on, or proceeding further, if need be, according to Art.

For the Dysentery and other sharp Fluxes.

Take the Stalks and Leaves of the Herb call'd in Latin *Coniza Media* (in English, *Flea bane*) dry it gently, till it be reducible to Powder ; of this Powder give about one Dram at a time, twice or thrice a Day, in any convenient Vehicle ; or else incorporate it in Conserve of Red Roses.

For Ulcers in the Breast, and elsewhere.

Take *Millepedes* (in English by some called *Wood-lice*, by others *Sows*) and having wash'd them clean with a little White-wine, and dry'd them with a Linen Cloth, beat them very well in a Glass or Marble Mortar (for they ought not to be touch'd with any thing of Metal) and give the first time as much Juice as you can by strong Expression obtain from five or six of them. This Juice may be given in small Ale or White-wine, in which the next time you may give as much as can be squeez'd out of Eight or Nine *Millepedes* ; and so you may continue, increasing the number
that

that you employ of them by two or three at a time, till it amount to Twenty five or Thirty ; and if need be, to forty or more, for one taking. And note, That if upon the pounding of these Insects, you find the Mass they afford too dry, as it now and then happens ; you may dilute it with a little White-wine or Ale, to be well agitated with it, that being penetrated, and so softened with the Liquor, the Mass may the better part with its Juice.

For Fluxes, especially accompanied with Gripings.

Take of *Crude Lapis Calaminaris* finely powder'd two Scruples, of *White Chalk* one Scruple; mix them exactly, and give them in a Spoonful or two of New Milk twice, or if the case be urgent, thrice a Day.

For a Rupture, especially in a Child or young Person.

Take of that *Geranium* or *Cranes bill* that is commonly called *Columbinum*, reduce the *Root* and *Leaves* to fine Powder, and of this let the Patient take about half a Spoonful Night and Morning for three or four Weeks together, washing it down each time with some Spoonfuls of Red Wine.

For

For difficulty of Hearing, from a cold Cause.

Out of a *Bulb* or *Root* of *Garlick*, chuse a *Chive* of a convenient bigness; then having pass'd a fine piece of *Thread* or *Silk* through one end of it, that thereby it may be pull'd out at pleasure, crush it a little between your *Fingers*, and having anointed it all over with *Oyl* of *Bitter* (or in want of that, *Sweet*) *Almonds*, put it into the Cavity of the Patient's *Ear* at *Bed* time, and draw it out the next *Morning*, stopping the *Ear* afterwards with *Black Wooll*; but if need require, this *Operation* is to be reiterated with fresh *Garlick* for some *Days* successively.

A choice Plaister to strengthen the Joints after the Gout, and hasten the going off of the Pain.

Take of *Paracelsus* and *Diapalma*, ana, melt them and incorporate them exactly together, and spread the mixture very thin upon fine *Leather*, to be us'd as a *Plaister* to the part affected.

A very good Drink in continual Fevers.

Make a *Decoction* of the *Leaves* of *Rue* in fair *Water*, till the *Liquor* taste pretty strong of the *Plant*: This being strain'd, is to be made somewhat palatable with *Liquorice*, or a little *Sugar*, or *Aromatick* Body: To half a *Pint* of this add about 10 *Drops*
of

of *Spirit* (not *Oyl*) of *Vitriol*: Let the Patient use this for his ordinary Drink.

A Simple Antimonial Remedy, that has often done much Good even in the Lepkossie, and all continual Fevers.

Take *Crude Antimony*, well chosen and Powder'd : of this give about one, two, or three Scruples Morning and Evening, according to the Age of the Patient, in a little *Syrup of Clove Gilly-Flowers*, or any such Vehicle, or else mix'd with fine Sugar, enough to make it somewhat palatable. This may be continued for 4 or 5 Month's, if need require; and if the first Dose prove beneficial to the Patient, in Cases not urgent, a Scruple or half a Dram may serve the Turn, nor need the Exhibition be continued for so long a Time.

An Experienced Wash that quickly cures the Itch.

Take strong *Quick-lime* one Pound, and put to a Gallon of Spring-water, let them lie together for some Hours, and then warily pour off the clear, filter the rest, and take two Ounces of *Quick-silver*, ty'd up in a Linen Bag, and hang it in the Liquor, and boil it for half an Hour or more; then pour off the clear Liquor once more, and wash the Hands only with it twice, or at most thrice, a Day.

A choice Medicine for a sore Throat.

Take a piece of *greasie Linnen Cloth*, of such a bigness, as that being doubled, it may make a Bag in form of a Stay, to reach from one side of the Throat to the other, and contain as much Matter, as may make it of the thickness of an Inch or more : This Bag being fill'd with common *Salt* is to be heated thoroughly, and apply'd to the part affected as warm as the Patient can conveniently endure ; and within two Hours after, or when it begins to grow too cold, another like it, and well heated, is to be substituted in its room ; and whilst this is cooling, the other may be heated and made ready for use : So that the part affected may be always kept in a considerable degree of Warmth, for about 48 Houres, if the Remedy be so long needed.

A Powerful Application to prevent and check the Apoplexy.

Make an *Issue* at the Meeting of the *Sutures*, and keep it open for a good while ; but if the Case will not admit delay, clap on a good *Cupping-glass*, without *Scarification*, or with it, as need shall require, upon the same Concourse of the *Sutures*.

A Choice Medicine for a sore Throat.

Take *Houfseek*, and having lightly beaten it in a Glass or Stone Mortar, press out
the

the Juice hard between two Plates ; to this Juice put almost an equal Quantity of *Virgin-honey*; mix them well, and add to the mixture a little *Burnt Allum*, as much as is requisite to give it a discernable *Aluminous Taste* : Let the Patient take this from time to time, with a *Liquorish Stick*, or some such Thing.

A rare Medicine to take away Gouty, and other Artbritick Pains.

Take highly rectify'd Spirit of Man's Urine, and anoint the part with it, the Cold being just taken off, once or twice the first Day ; and no longer, unless the Pain continue.

For the Pyles.

Take *Balsam of Sulphur* made with Oil of Turpentine, Ointment of Tobacco, equal parts, incorporate them well, and anoint the griev'd place therewith.

An experienced Medicine for the Cholick.

Take good Nitre one Ounce, and rub it well in a clean Mortar of Glass or Stone, then grind with it half a Scruple or more of fine Saffron, and of this mixture give about half a Dram for a Dose in three or four Ounces of Cold Spring water.

To make an Issue run, that begins to heal
up.

Take of *Lapis Infernalis* one Ounce, of
Crown Soap an Ounce and half, *Chalk* finely
Powder'd six Drams, mix them all together
carefully, and keep them close stopt, except
when you mean to use them.

A Stomachic Tincture.

Take *Agrimony*, two Drams, small *Gentianry Tops* one Dram, *Coriander Seeds* bruised one Scruple, *Sassafras* Shavings and *Bark* one Dram, *Gentian-root* half a Dram, *Zedoary-root* ten grains; pour upon these three quarters of a Pint of boiling Spring Water, cover it, and let it steep twelve Hours, then strain it, and put it in a Bottle; then drop a drop of Oil of *Cinnamon*, upon a lump of *Sugar*, and put it into the Liquor. The Dose is three Spoonfuls twice a Day, an Hour or two before Meals.

An incomparable Medicine for the Cholick.

The yellow Peel of Oranges, being reduced to Powder, give from half a Dram to two Scruples of it in any convenient Vehicle.

*An excellent Mixture for Fits of the Cholick,
and some Kinds of Convulsions.*

Take one Ounce of Flowers of Sulphur, and as much Sugar-candy, grind them very
well

well together in a Glass or Stone Mortar, and upon this Quantity drop thirty Drops of Oyl of Carraway-seeds, as much of Oil of Orange, and as much of the Oil of Anni-seeds : Incorporate these well, and of the Mixture give about 20 or 30 Grains for a Dose.

A somewhat sharp, but often try'd Medicine, to take off the Pearl on the Eye.

Take of the Juice of Celandine, and mix with it about an equal Part of pure Honey ; and of this Mixture employ a Drop, or at most two, at a Time, letting it fall upon the Part affected, Morning and Evening.

An easy Remedy for a Recently Blood shot Eye.

Take a rotten Apple, and as many Tops of Wormwood, as being well beaten together with it will make a Mass of the Consistence of a Cataplasm ; warm this a little, and put a sufficient Quantity of it into a thin and clean linen Rag, and let the Patient keep it upon the Part affected all Night, the next Morning wash it off with some red Rose-water, or the like Liquor.

To make a Choice Ophthalmick Water to preserve the Eyes and Sight.

Take of the distill'd Water of Rue, Celandine, and Vervain, of each one Ounce ; mix them, and infuse in them two Drams of *Crocus Metallorum*, exquisitely ground, for a Week or ten Days ; then very carefully filter

filter the Infusion, that none of the Atoms of Powder pass thorough with the Liquor. Of this let fall into the Eye a Drop or two, Morning and Evening, having a Care not to shake the Glass, when you employ the Liquor, lest some unheeded Dust may have escap'd the filter, and be rais'd.

An experienc'd Eye-water for an Inflammation and Tumor of the Eye.

Take of prepar'd Tutty half an Ounce, the Water of white Roses and of Frog's Spawn, and also of the best Canary Wine (not distill'd) of each two Ounces, of *Aqua Mirabilis* half an Ounce: Mix these well, and drop a very little at a Time into the Patient's Eyes.

An experienc'd Water for sharp and slimy Humours in the Eyes and Eye-lids.

Take of prepar'd Tutty half an Ounce, prepar'd Coral and Pearl of each half a Scruple, *Trochisci Albi Rhafis.* five or six Grains, red Rose-water and Succory-water, of each an Ounce and half; mix them well, and if you will have the Medicine stronger, you may put three or four Grains of Aloes into it.

To make an excellent Eye-water for Redness and light Films, &c. upon the Eye.

Make some Lime-water, by pouring a Gallon of scalding-hot Water upon a Pound
or

or somewhat more of Quick-lime; stir them together, and after some Hours decant warily that which is clear. And to a Pound of this Water put half an Ounce (and no more) of choice Verdigrease pulveriz'd: And in a very moderate heat extract a Tincture of a fine, but somewhat dilute, Saphirine colour, (but it ought not to be too deep.) Decant this very warily, and let a Drop or two of it at a Time fall into the Eye, as often as Need requires.

An excellent Remedy to stop a violent Defluxion on the Eye.

Take red Sage and Rue, of each one Handful, a Spoonful of fine Wheat-flower, and the White of a new-laid Egg beaten to Water, mix these very well, and spread them upon very thin Leather or black Silk, and apply it to the Temples; 'tis to be about the Bigness of a silver Crown at least.

An excellent Remedy for red Eyes, made such by a Defluxion of a hot or sharp Humour.

Take of the Tops of Rosemary about one Dram, and beat them up with one or two Ounces of rotten Pearmaines or Pippins, or if those cannot be had, with the like Weight of the soft Part of the same Apples that are sound. And when by exquisite beating, you have reduc'd these Things to a Cataplasm, apply them, the Cold being
first

first taken off, to the Part affected, binding it thereupon, and letting it lie all Night.

The Lady Eitz-harding's Eye-water, which lately cur'd an almost blind Person, whose Eyes look'd like Glafs.

Take three Spoonfuls of white Rose-water, as much Eye-bright Water, and as much sifted white Sugar-candy as will lie on a Three-pence, and the same Quantity of fine Aloes sifted and put to the Water, and shak'd together, and drop a few Drops every Night going to Bed.

A Pericarpium, or Wrist-Plaister, that oftentimes frees the Patients from flying Clouds in the Eyes, and sometimes lesser Specks, especially if Recent.

Take of Rue, Camomile, Hemlock, each half a Handful, of Bay-salt two Spoonfuls, one or two Ounces of Leaven; incorporate these well together, and make thereof *Pericarpia*, to be apply'd to the Patient's Wrists, and kept on, till growing dry, they become troublefom.

Elixir Salutis.

Take of the Seeds of Anise, sweet Fennel, Coriander, and Parsley, of each two Ounces; of Liquorish scrap'd, wash'd, and bruis'd, and choice Leaves of Senna, of each likewise two Ounces; of Raisins of the Sun, rub'd
clean

clean and bruis'd one Pound; of Elecampane-Roots and *Guajacum* Wood, of each one Ounce. Mix these Ingredients, and pour on them two Quarts of *Aqua Vitæ*, or *English* Spirits (for Brandy is too hot a Liquor.) Let these infuse together 48 Hours. Then put them all into a hair Bag, and press them strongly in an Apothecary's Press, and if there be need, pass what is strain'd, through an Hippocras-bag after the Liquor is settled. Keep this in Bottles well stop'd in a cool Place, and give of it two or three Spoonfuls at a Time, in the Morning fasting, and if Need require, at Bed-time.

An excellent Drink in Fevers, even malignant.

Take a Quart of Spring-water, and having given it a walm or two, put to it one Ounce at least of Harts-horn, calcin'd to perfect Whiteness, and when the Mixture is cold, put to it three Ounces of Syrup made of the Juice of Lemons, shake this Mixture; when you would use it, shake it well, and let the Patient take of it a moderate Draught several Times in the Day and Night.

An useful Drink in feverish Distempers.

In a Pint and a half of clear Possiet-drink, boil about one Ounce of cleans'd Roots of *Dandelion*, or *Piss-a-beds*, cut or slic'd very small, till near half a Pint be wasted, and then strain it, and let the Patient take half

K

a Pint

a Pint, or the whole Quantity if he can, at a Time.

An excellent Remedy for Dysenterical Fluxes.

Take good *Venice* Turpentine, and with a very gentle Heat evaporate so much of it, that when 'tis cold, it may be but little short of Coagulation. This yet soft, but not fluid Substance, incorporate with fine Sugar, enough to make it up into Pills, whereof give in the Morning fasting as many a will amonut from a Scruple to half a Dram or 2 Scruples, or a whole Dram of the Turpentine, besides the Sugar.

A try'd Medicine for the falling down of the Fundament.

Take some Ginger, and having carelessly slic'd it, put it in a little Pan, heat it by clear and well kindled Coals, and let the Patient receive the Fume of it, cast on by little and little in a kind of Close-stool, or some equivalent Seat, where the lower Part of his Body may be well cover'd for about half a quarter of an Hour at a Time.

An experienc'd Medicine for a Gonorrhæa.

Take two Ounces of ripe Laurel-Berries, and infuse them for a Day in a Quart of good White-wine: Of this let the Patient drink about two or three Spoonfuls twice a Day for a pretty while together; only once in three Days (or thereabouts) intermitting, that he may take some gentle purging Medicine.

For

For a Gonorrhæa.

Take choice Mastich a sufficient Quantity, and having very finely beaten and sear'd it, take about half an Ounce of it at a Time in the Yolk of a new laid Egg, washing it down, if it be thought needful, in any convenient Liquor.

An excellent Ointment in the Gout.

Take *Barbadoes Tar*, and Palm-Oil, of each a like Quantity, melt them together over no more Fire than is needful to make them incorporate well; with this Mixture warm, the Part is to be anointed and warily chafed.

A slight but effectual Medicine to appease gouty Pains.

Take Linseeds well condition'd, and with a little Water beat them in a Marble or Glass-mortar, rubbing them very well, that the medullary Part may be separated in some Measure from the Husk, and may make the Water considerably white. In this Liquor dip clean Rags, and when they are thorowly wetted, apply them somewhat warm to the Part affected, shifting them if need be once in an Hour, or at most in two.

A speedy Remedy to take off Arthritick or gout Pains.

Take good Spirit of *Sal Armoniac*, and with a Feather dipt in it moisten gently all the Part, or Parts affected.

A Medicine that almost presently appeases the Pains of the Gout.

Take of black Soap four Ounces, choice Wood-foot finely sifted about a Dram and half, and add to these about half the Yolk of an Egg: Incorporate them diligently together, and spreading the Mixture somewhat thin, apply it (the cold being first taken off) by Way of Cataplasim to the Part affected.

To make an excellent Cephalick or Head Powder, good also for the Eyes.

Take the Leaves or Flowers of Betony, Marjoram, and Damask Roses, also the Flowers of Sage and Rosemary, all at Discretion. To these add the Powder of *Lignum Aloes*, and some Seeds of *Nigella Romana*. Reduce all these to Powder, to be us'd as a Hair-powder, when the Patient goes to Bed.

An experienc'd Medicine for Dulness of Hearing, and Hysterical Affections.

The Juice of red Onions is excellent for Diseases of the Ears, and for a Deafness in its Beginning. *N. B.* Briony-Roots also wonderfully prevail against all Affections of the Womb.

*An experienc'd Medicine for the Pain of the
Hæmorrhoids.*

Take the Sole of an old Shoe, worn by some Man that walks much, cut it in Pieces, and burn it, not to white or gray Ashes, but to a fryable and tender Coal; reduce this to impalpable Powder, and then with a sufficient Quantity of unsalted Lard make it into an Unguent, wherewith the Part affected is to be anointed from Time to Time.

For the Hæmorrhoids.

Make a Suppository of Hogs-Lard or Bacon, or instead of that employ Goose-grease made up into the same Form.

For the Hæmorrhoids.

In the Yolk of an Egg, or a little of some convenient Syrup or Conserve, give from half a Dram to two Scruples or one Dram, or somewhat more, of Flower of Brimstone, once, or if the Case be urgent, twice a Day. The Powder may be also given in Milk, to those that like it better than sweet Vehicles.

*A choice internal Remedy for painful Hæ-
morrhoids.*

Take about two Scruples of choice Sulphur *vive*, and mix it with a little Sugar to make it relish, and give that Dose once, or at most twice a Day.

A very choice Medicine for the Pain and Tumours of the Hæmorrhoids.

Take fresh Leeks (the whole Plant) shred them small, and fry them well with fresh Butter, till they be fit to be brought to the Consistence of a Cataplasme or Poultice, that is to be apply'd very warm to the Part affected, and to be renewed from Time to Time, as Need shall require.

An useful Medicine for the Pain of the Hæmorrhoids.

Make up Flower of Brimstone and an equal Weight or a double of fine Sugar, with a Solution of Gum-Dragon, into Tablets that may weigh about a Dram a Piece; of those that contain the most Sulphur you may give one twice a Day, but of the other Sort much oftner, if Need require.

For the Hæmorrhoids, a very successful try'd Medicine.

Take maiden Leeks (as some call those that grow without having been transplanted) and casting away the green Part, make of the bulbous Part and a sufficient Quantity of whole Oatmeal a Caudle, whereof let the Patient eat plentifully.

A Medicine almost Specifick for the Yellow-Jaundies.

Take clean Filings of Steel a sufficient Quantity, and to make them grind the better,

better, mix with them some Loaf-Sugar; grind them long with great Exactness, for in that consists the chief Secret of this Medicine. Of this impalpable Powder give about half a Dram for a Dose (besides the Sugar;) and if need be, give it twice or thrice a Day, in any convenient Vehicle.

A Specifick Remedy for the Yellow-Jaundies.

Take one Part of good Saffron dry'd, enough to be rub'd in a Glass-mortar into Powder, and incorporate it well with four Parts of choice Turmerick. In the mean Time take a Handful of fresh Sheeps-dung, and let it steep in about a Quart of strong Ale in a moderate Heat, till the Liquor be fully impregnated with the Virtue of the Dung. Then strain it lightly thro' a linnen Cloath, into a Pint of it, or as large a Draught within the Limit as the Patient can well take, give about half a Dram of the foremention'd mixt Powder. This do in the Morning fasting, and in the Evening about Bed-time, giving also another Dose the Morning after the first.

A good Medicine to increase Milk to those that give Suck.

Make Pottage with Lentils (which many distinguish not from Vetches) and let the Patient use freely of it.

Another Medicine to increase Milk in Nurses.

Take Earth-worms, wash them well, freeing them carefully from their Excrements, and from all adhering Earth and Filth. Then dry them so as they may not stink, and yet be pulverable. Of these, reduc'd to Powder, give half a Dram or two Scruples for a Dose, in Wine or any other proper Vehicle.

A good Remedy for divers Affections of the Genus Nervosum, or Nervous System.

Take of the fresh Roots of the Male Piony one Ounce, of the Seeds of the same Plant two Drams, and with a sufficient Quantity of the Syrup of Piony, or some Conserve of the like Nature, beat them up into an Electuary, (which is best done not long before you mean to make use of it) of which the Patient may take the Quantity of a small Nutmeg or more if Need be twice a Day, and if Occasion requires it, thrice.

A very often try'd Remedy for the Asthma.

Take Soap-boilers Lees (made with Pot-Ashes and Quick-lime) one Part, Spirit of Wine rectify'd two Parts; set them in Digestion, (to unite them well) and then add some Drops (at Discretion) of chymical Oil of Carraways, and if you please, of Ani-seeds

seeds too. The Dose in younger Persons is about 10 Drops, in elder ones, from half a Dram to one Dram in some convenient Vehicle.

An excellent Medicine for a dry or convulsive Asthma.

Take choice Saffron, reduce it (by rubbing it in a Stone or glass Mortar) to a kind of Powder, and with any convenient Mixture give 8 or 10 Grains of it in the Form of Pills at Bed-time.

An experienc'd Remedy for Difficulty of Breathing.

Take of choice *Castoreum* dry'd enough to be powder'd, 2, 3, or at most 4 Grains, mix this with 10 or 11 Grains of *Gascoin's* Powder reduc'd to very fine Powder; mix up these with some little Syrup or Conserve, and when the Patient has taken it, let him wash it down with the Mixture, consisting of five Drams of Pennyroyal-water, and half a Dram, or at most two Drams of Briony-water Compound.

An experienc'd Medicine for Coughs.

Boil good Turnips in Water, and having exprest the Juice, mix with it as much finely powder'd Sugar-candy as will bring it into a kind of a Syrup, of which let the Patient swallow a little as slowly as he can from Time to Time.

A good Medicine for Asthmatick Coughs.

Take two Ounces of Oil of sweet Almonds freshly drawn, and put them upon one Dram of Flowers of Brimstone, keep them for a Fortnight in Digestion in a moderate Heat, and then decant off the Oil, or pass it through a clean linen Rag to keep back the Brimstone: Of this Liqueur give a Spoonful or two at a Time.

An easy Medicine, which cur'd not long since a Gentlewoman that had taken much Physick for a consumptive Cough.

Take 8, 10, or 12 well chosen Raisins of the Sun, and having slit them open, take out the little Kernels, and stuff the Raisins with the Tops or small tender Leaves of Rue; and let the Patient take them either as they are, or in the Form of a *Bolus* or the like, pretty early in the Morning, fasting after them two or three Hours at least, if he cannot conveniently fast till Noon.

An effectual Plaster for softening and loosening Corns.

Spread a Plaster of *Gum Ammoniacum* (not too thick) without being dissolv'd in Vinegar, and applying it to the Part affected, let it lie on, till it have sufficiently done the designed Work of Emollition.

A powerful (but smart) Remedy for the Corns.

Evaporate the strongly exprest Juice of Radishes to the Consistence of a soft Plaster, to be^a applied to the Part affected, and shifted as often as it grows dry. *N. B.* 'Twill sometimes smart for a while at first, but afterwards 'twill do its Work.

An experienc'd and by some good Authors) excellent Medicine for the Pleurisy.

Take as many fresh Balls of Stone-horse Dung, as the Horse in good case may disburden himself of at one time ; cover these, whilst they are warm, with good White-wine ; let them stand a little to act on one another, and then press out gently through a clean Linnen Cloth as much Liquor or Juice as the Mixture will readily afford ; and of this (somewhat warm) give a moderate draught, from time to time, as need shall require.

A very often Experienc'd Medicine for the Small-pox (especially in Children.)

Take the Balls of fresh Sheeps-dung, and having freed them from straws and dust, and other things foreign to them, put an handful of them thus cleans'd into a quart of good White-wine, and in a Vessel well stoppt, let them infuse in a moderate heat for a Night, or till the Liquor be well impregnated with the taste and colour of them.

Strain this Infusion, and give of it warm about

bout a Spoonful at a time, once in two or three Hours, or oftner if need require. *N. B.* In case of Necessity, the Infusion may be much sooner made, by putting into the Wine a greater proportion of the Sheeps-dung.

An excellent Medicine to strengthen a weak Sight.

Take Eye-bright, Penny-royal, Rue, Celandine, Lovage, Saxifrage, of each half a handful ; Blew-bottle-flowers, Fennel-seeds, Parsley-seeds, of each half a Dram ; Grains of Paradise one Dram ; Hyssop, Origany, Willow-leaves, each half an Ounce ; Galin-gal three Drams, Cinnamon one Dram, Sugar half an Ounce. Let them be finely powder'd, and very well mixt together. Take of this Powder one Scruple or half a Dram every Day with your Dinner.

A distilled Water for strengtbening the Sight.

Take Rosemary-flowers, Sage, Betony, Rue, and Succory, of each one handful. Infuse these in two quarts of good Sack, distil them in a Copper Alembick. The Dose is a moderate Spoonful.

A much commended Powder to strengthen the Sight.

Powder of Eye-bright one Ounce, ordinary

mary Fennel-seed in Powder half an Ounce
 Powder of Nutmegs half a quarter of an
 Ounce, double refin'd Sugar two Oun-
 ces. All these being finely powder'd and
 sifted, are to be mixt together, and taken
 as much as will lie on a Shilling at a time,
 as often as you please. The Powder is to be
 taken dry, and kept in a Box close shut in
 some dry place. This has done great Cures
 in dimness of Sight, and Rheums in the
 Eyes.

*To make a Drink to be taken like Tea for
 strengtbening the Sight.*

To a quart of Water ready to boil, put
 in half a handful of Eye-bright, and then
 let the Liquor boil but one walm or two,
 before you take it off to drink it instead of
 Tea.

A rare Water to strengthen the Sight.

Take Clary, and distil it in a cold Still ;
 and of the Water, let the Patient take
 every Morning, and if need be, every Night
 going to Bed, from two or three spoontuls
 to six, either alone, or sweetned with a little
 Sugar ; let him also with the same Water
 unsweeten'd, bath or wash the Parts affec-
 ted in the Morning, and at Bed time ; and
 if need be, once or twice more every Day.

An

*An Excellent External Medicine to strength.
en the Stomach.*

Take Wormwood, Mint, and Mugwort, and by beating them well in a Sone or Glass Mortar, make a Catapla sm, to be apply'd somewhat warm to the Stomach, and kept upon it for a pretty while.

An often try'd Remedy to strengthen the Stomach, and also to take off Griping Pains in or near it. ('Tis good also for Colds.)

Take Emplastrum Stomachicum of the London Dispensatory, and drop upon it five or six drops of Oyl of Cinnamon, rubbing it well over with your Finger, and so apply it to the Patient's Stomach; and after three or four Days, or as soon as it grows dry, remove it, and having scrap'd the Plaister, and warm'd it on the wrong side, let fall some drops of the Oil of Cinnamon upon it, or more Drops of the Cordial Spirit, and apply it again.

*A Parable, but Excellent Medicine in the
Fit of the Stone.*

Take somewhat less than a handful of red Chick-pease, or Cicers, and boil them softly in a quart of Spring-water till the Liquor be red, and well impregnated with the Seeds: Strain this Decoction, and sweeten it with Syrup of Marsh-mallows, out of which all the stronger Diureticks are left.

For

For the Stone.

Take a quarter or half a pint of simple Arsmart Water, sweeten it with a little Sugar or some convenient Syrup, and Aromatize it with a little Nutmeg scrap'd, and give this mixture for one Dose.

For the Stone and Gravel in the Reins and Bladder.

Take equal Weights of common Daucus-seeds, and of Burdock-seed, and having mixt these together, put one Ounce of the mixture to a Gallon of small Ale, and let the Patient use it as a constant Drink.

An almost Specifick Remedy for the Tooth-ach.

Into a Quart of red Wine (or at least of Claret) put one Dram of Allum, and another of Acorns, a Dram and half of Galls, and half a Handful of good dry'd Rose-leaves. Boil this to the Consumption of near half, and then take it from the Fire and strain it, and dissolve in it a Dram and a half of *Acacia* cut into small Bits, and with this Liquor a little hot, you must wash the Part several Times in a Day.

An uncommon, but not unuseful Remedy for the Tooth-ach.

Let the Patient lie on the Ear that is opposite to the Part affected, and into the other Ear drop two or three Drops of the
freshly

freshly exprest Juice of Rue a little warm, and stop the Ear lightly with fine black Wool or Cotton.

An excellent Remedy to fasten Teeth.

Take of burnt Allum, Acorns, of each one Dram, Galls a Dram and half, red Roses half a Handful. Beat all these together, and make them boil in about a Quart of good red Wine, to the Consumption of about a fourth Part. Then strain the Decoction, and dissolve in the transmitted Liquor of good *Acacia* cut into very small Bits half a Dram. With this Decoction the Mouth is to be wash'd several Times in a Day.

To fasten the Teeth.

Put Mastick finely powder'd upon the End of an Handkerchief, rub your Teeth therewith twice or thrice in a Day, and chew Mastick often. Also boil Pomegranate-flowers with Mint or Mastick in Red or Claret Wine, Gargle or wash your Mouth often with it.

A Medicine prescrib'd to a great Prince (Charles the First) to fasten the Teeth.

Take a Pint of Spring-water, and put to it four Ounces of Brandy; let the Patient wash his Mouth with the Mixture of these every Morning, and twice or thrice a Day

Day besides ; and let him in the Morning, rowl for a little while, a Bit of Roch-Allom to and fro in his Mouth.

An excellent Medicine to fasten the Teeth in scorbutick Gums.

Take of choice Bole-Armony two Drams, choice Myrrh (not lucid) one Dram, Roch-Allum crude half a Dram, Claret-wine one Pint. Boil these softly a little while together, and let the Patient use it twice, thrice (or if Need be oftner) in a Day.

A Lotion to fasten the Teeth.

In a Quart of Spring-water boil for a while one Ounce of the best *Terra Japonica* reduc'd to gross Powder. And then having filter'd the Decoction, keep it stop'd for Use.

An excellent Medicine to relieve those that are troubled with Tumours in the Throat, and some other Parts.

To a Quart of new Milk put a Handful of Mallow-leaves, with as much of the Leaves of *Solanum*, or Nightshade, shred them small, let them boil, till the Herbs be tender as if they were to be eaten. Then put into the Milk as much Crumbs of White-bread, as being stirred well with the other Ingredients, will bring all to the Consistence of a Pultise. This is to be spread upon

upon a Stay for the Throat, or some other Thing fit to be apply'd to any other Part affected, and is to be laid on as hot as the Patient can well endure it, and when it begins to grow cold, it is to be succeeded by fresh made very hot, and so long as the Case shall require.

THE VERMIN-KILLER.

Of Rats and Mice.

To kill Rats and Mice.

T'AKE Hellebore Leaves, mix it with Wheat-flower, make it into a stiff Paste with Honey, and lay it into the holes, where the Rats and Mice come, and when they have eat of it, it's present Death. Approved *Paxamus*.

Another.

Take Bitter Almonds and Wheat-flower, mix it into a stiff Paste, and lay it as before, and it kills the Rats and Mice, Approved *Paxamus*.

Another.

Take the Seed of wild Cucumbers, mixed with an equal quantity of Colliquintida and Oat-flower, and make it into a stiff Paste, and when the Rats and Mice eat it,
it

it certainly killeth them. Approved *Paxamus*.

Another.

Take Pot-ashes and throw them into the Holes, where the Rats and Mice run, and that will in a few Hours time kill them. Approved *Agrippa*.

Another.

Take very small Filings of Iron or Steel, which you may have at any Smith's, that worketh with small Files, mix the aforesaid File dust with Wheat-dough, and when you lay it into the Holes, the Mice will greedily eat of it, and its present Death. Approved *Coruel. Agrippa*.

Another.

Take Hemlock-seed, and cast it into the Holes, where they usually come, and they will eat it greedily, and it certainly kills. Approved *Dydimus*.

To make Rats and Mice blind.

Take *Tithymalum* beaten to Powder sift it through a fine sieve, mix it with a like quantity of Wheat-flower, then put to it a sufficient quantity of Metheglin to make it into a stiff Paste, and lay it in the usual Places where the Mice and Rats come, and in a short time after they have eat it, they will become blind. Approved *Auatiolios*.

To.

To drive away Rats and Mice from a House or other Place.

Take the Herb wild Marjoran, and burn it in all the Rooms of the House, or Place, where you would be rid of the Mice, and they will immediately depart. and come no more so long as the Scent lasteth. Approved *Proxamus.*

Another.

Take the Head of a Rat or Mouse, pull the Skin from of it, and carry the Head where the Mice and Rats usually come, and they will immediately be gone from thence, running all together as if they were bewitched, and come no more. Approved. *Cornel. Agrippa.*

Another.

Take the Stone hemalites, or the green Herb *Merica*, and scent the Places with them, where the Rats and Mice usually come, and it will cause them to depart immediately, *Approved.*

To gather together all the Rats and Mice into One place in a House or Barn, and to kill them.

Take a Brass or Copper Pot, as big as you can get, fill it half full with the Dregs of Oyl, and then set it in the most convenient

ent place in the House about the middle, and all the Rats and Mice will make their Appearance, as if it were to be an Assembly of an Army of Rats and Mice, and you may then strew about the Place Pot-ashes, and it kills them all. Approved *Aberto*.

Another.

Take two or three Living Rats or Mice, and put them into an earthen Pot, then stop the Pot close that the Rats or Mice cannot come forth, then make a Fire of Ash-tree Wood, and place the Pot on the Fire; when it burneth moderately, all the Rats and Mice in the House, hearing the Cry of those in the Pot, will run immediately to the place, where the Pot standeth on the Fire, as if they did intend by force to deliver the Rats and Mice in the Pot. Approved *Aberto*

To prevent Mice or Rats from coming into the Cheese Chamber.

Take the Brains of a Weasle, and mix it with Hogs Suet, and lay small quantities of it up and down the Room wherein the Cheese lyeth, and the Rats and Mice will not come in the Room. Approved, *Cornel. Agrippa*.

To catch Moles.

If you desire to catch Moles, lay before the Mole holes a head of Garlick or Onion, and

and they will immediately forsake their holes, and may be taken by a Dog. Approved *Albertus*.

To gather Moles together to one Place.

— Take a Living Mole, and put her in an Earthen-pot, and stop the Pot close, and make a Fire of Wood or Coals in the place where you would gather the Moles together. and set the Pot on the Fire, and immediately all the Moles will gather to the Pot, hearing the Moles in the Pot cry, and you may kill them. Approved *Cornel Agrippa*.

To kill Moles.

Take an earthen Jug or Pot that hath a fat Body and narrow Neck, and put Brimstone, Cedar-wood, Bees-wax and Rosin cut into small pieces, mix them together, then stop the Mole holes, that are near, with the Earth that the Moles have cast out, all but one, and into the hole that is open, put the Neck of the Earthen-pot after the Combustible matter is set on Fire. so that the smoak of the Pot may enter into the Earth, where the Moles pass, and they will immediately be choaked, Approved *Plin*.

Another.

Take wild Hellebore bruised very small, mix with it Wheat-flower, the white of an Egg,

Egg, Milk and Wine, and lay little Cakes of it in the mouth of the holes, and the Moles will greedily eat of it, and it certainly kills them. Approved *Pliny*.

Another.

Take the Juice of wild Cucumbers, and pour it into their holes, and it killeth them. *Paxamus*.

Another.

Take the dregs of Oyl and pour it into their holes, and they die very quickly. Approved *Pliny*.

To kill Weasles.

Take Sal Armoniac and Wheat-flower, mix it into a Paste with Honey ; and throw it in such places where the Weasles usually come ; they greedily eat it, and it quickly killeth them. Approved *Cornel, Agrippa*. —

To drive away Weasles.

You must catch a Hedg-liveing Weasle, and cut out his Stones, and cut his tail short, and let him run, and all the other, be they few or many, will run away, and provide habitation elsewhere. Approved *Apbrian*.

To gather together the Weasles.

Take the Gall of a Lizard, beat it with
Spring

Spring-water, and pour it on the Ground in such places, where the Weasles usually come, and they will be in an instant gathered to that Place. *Approved Mizaldus.*

To prevent Weasles from sucking of Eggs.

Take Rue, and lay it about the places where the Hens lay, and the Weasles will not come near it.

To drive Snakes and Adders out of the Garden.

Plant Wormwood in several places of the Garden, and they will not frequent the Gardens. *Approved.*

Another.

Take Lilly-roots or Harts-horn, and smoak the places with either of them, burning in a Fire pan, and they will depart and come no more. *Approved Prox.*

Another.

Take Dear Suet, and strew it up and down where they usually come, and they will depart from the place. *Approved Agrippa.*

Another.

Take the Roots of Centory, and lay it in the place where they come, and they will depart. *Approved.*

Another.

Another.

Take the Stone *Gagites*, and lay it in the aforesaid place, and they will depart, *Approved.*

Another.

Take a good quantity of old soles of Shoes, and burn them upon the place where they usually are, and they will be gone, and come no more, *Approved Pliny.*

Another.

Take the boughs of the Ash-tree, while the green Leaves remain on them, and lay them up and down where the Snakes or Adders usually come, and they will depart *Approved.*

For a bite or sting of the Snake or Adder.

If any be bit or stung by the Snake or Adder, then give him the Juice of Ash-tree Leaves squeezed into good Wine or Beer, then cover the place stung with Ash-tree Leaves, this hath been always found good for these Accidents, for the Ash-tree is from a secret virtue a deadly Enemy to the Snakes and Adders, *Approved Cornel. Agrip. Plin. Paxamus.*

To kill Snakes and Adders.

Take a large Raddish and strike the Snake or Adder with it, and one blow will kill him, *Approved.*

To gather Snakes or Adders to one place.

Take one handful of Onyons, and ten River Craw-fish pound them together, and lay it in the place where the Snakes and Adders are, and they will all assemble together. Approved *Pliny*.

To kill Pismires.

Take the roots of wild Cucumbers, and set them on Fire, where the Pismires are, and the smoak will kill them. Approved *Cornel. Agrippa*.

To drive away Pismires.

Take an Earthen-dish full of Pismires and the Earth where they are, and make a good Fire, and lay the Earthen Pot on the Fire, and the Pismires will not remain near that place. *Approved*.

Another.

Take Musle-shells, burn them with storax, and beat them to a small Powder, and strew the Powder, where the Pismires usually are, as on the great Banks, and they will all come out of their holes, and be killed. *Approved*.

Another.

Take Origanum beaten to Powder, and strew it before the holes, and it will kill them. *Approved*.

Another.

Another.

Take *Cirenicum* and melt it in Oyl, and pour it on the Pismire Banks, and it will kill them. *Approved.*

To preserve Plants from the Pismires.

Take Lupin beaten with the dregs of Oyl, and anoint the bottoms of the Plant therewith. *Approved.*

To keep the Sugar-box or Spice from Pismires.

Cover your Sugar-box with White Wool, or anoint it with Rubica. *Approved Pliny.*

To drive away Pismires.

Take half a pound of Brimstone, melt it in an Earthen-pot on a slow Fire, mix with it the Salt of Wine-stone three or four Ounces mix it so long till it become red, then take it from the Fire and beat it on a Board with fair Water, and it will cool Immediately then let it dry, and beat it to Powder in a Mortar, then put it into a Glass, and let it stand till it hath coloured the Water, sprinkle the Water on the Pismire Banks, and it kills them. *Approved Cornel-Agrippa.*

To kill Bugs.

Take a convenient quantity of fresh Tar, mix it with the Juice of wild Cucumbers,

let it stand a Day or two, stirring it four or five times a Day, then anoint the Bedstedts with it, and all the Bugs will die. Approved *Paxamus*.

Another.

Take Squills beaten to Powder, mixed with the best Wine-vinegar, then take a sponge and wet it in it, and rub the Bedstedts, and it will kill the Bugs. Approved *Cornel. Agrippa*.

Another.

Take the Gall of an Ox and mix it with Vinegar, and rub the Cracks and Joints of the Bedsted with it, and all the Bugs will die in a short time. Approved *Pliny*.

Another.

Take a quantity of Brimstone, beat it to Powder, then mix the Powder with old Oyl, and use it as before. Approved *Paxamus*.

Another.

Take strong Glew, and boil it with Vinegar, and rub the Bedstedts with it. and the Bugs will certainly die. Approved *Cornel. Agrippa*.

Another.

Take the Dregs of Oyl, and let it boil on the Fire, then mix with it the Gall
of

of an Ox, use it as before. Approved. *Anathol.*

Another.

Take Hellebore bruised with Oyl, and rub the Joints of the Bedsteds and it kills them; Approved. *Paxamus.*

Another.

Take Wormwood, and Rue of each a good handful, mix them with common Oyl, and put to them as much Water as Oyl, that the Oyl and Water may cover the Wormwood and Rue; then boil it till all the Water is boiled away, then strain the Oyl from the Herbs, and mix it with Sheep-suet as much as the Oyl, anoint the Bedsteds with it, and its an infallible remedy. Approved, *Cornel. Agrippa.*

Another.

Take Quick-silver and mix it with Hogs Grease, of each a like quantity, use it as before. *Cornel. Agrippa.*

Another.

Take Brimstone and Wax, and burn them under the Joints of the Bedsteds and Creases, where the Bugs are, and they will immediately come out of their holes, and you may kill them. Approved, *Cornel. Agrippa.*

Another.

Take a good handful of Wormwood and
L 3 White

White Hellebore, and boil them together in Urine till two parts are wasted, and use it as formerly. *Paxamus.*

To kill Fleas.

Take Wormwood, and the root of wild Cucumbers, and boil them in Pickle, and sprinkle it in the Room, and it will certainly kill the Fleas. Approved *Cornel. Agrippa.*

Another.

Take Malanthium steeped in Water three or four Days, then sprinkle the Room with it, and you will immediately find the effects. *Paxamus.*

Another.

Take Soap lees, and boil two or three Onions in it, let it cool, then sprinkle the Room with it, and it kills the Fleas. Approved.

Another.

Take Mustard-seed, and boil it with the Herb Daphnes, and Water, and sprinkle the Room with it. Approved *Paxamus.*

Another.

Take Lime beaten to Powder, and strew it in the Chambers. Approved.

Another.

Take Lee, and She-goats Milk, and it is an

an Infallible remedy. Approved, *Cornel. Agrippa.*

Another.

Take the Lees of Oyl, and sprinkle the Room with it, and it is a certain remedy. Approved.

Another.

Take Wormwood, Eve Averon, Nut-leaves, Lavender, green Coriander, put them under the Bed or Pillow, and the Fleas will die. Approved *Pliny.*

Another.

Take Wormwood, Lavender, and Nut-leaves, and boil them in Vinegar a good while, then sprinkle the Blanket with it, it certainly kills the Fleas. Approved *Paxamus.*

To gather all the Fleas together, that are, in the Room.

Take an Earthen-pot, and cut a hole in the floor of the Room, so big as the Pot may stand with the Mouth even with the floor of the Room, then take the Blood of an Ox, and mix it with the Soot of a Chimney, and rub it in the inside of the Pot, and all the Fleas will come into the Pot in a days time. Approved *Cornel. Agrippa.*

L 4

Another.

Another.

Take an Earthen-platter or Dish, that is broad and shallow, fill the same half full with Goats Blood, and set the Platter under the Bed, and all the Fleas will come into it, like a swarm of Bees. Approved *Pliny*.

Another.

Take a small piece of Wood, as big as a Mans Arm, and rub it over with Hogs-grease, and all the Fleas will gather to it, if you lay it in the middle of a Room. Approved *Cornel. Agrippa*.

Another.

Take the Blood of a Bear or Badger, and put it under the Bed, as before, and it gathers the Fleas to it, and they die immediately. Approved, *Pliny*.

To kill Lice.

Take Salt Water, and rub the afflicted places with it, or Vinegar, or Onion, and mix in it Allum and Aloes, and therewith anoint the place. *Alex*.

Another.

Take Hogs-lard- Quick-silver, and Sage as much of each as is needful; mix them together to a Salve, and anoint the afflicted places. *From an Italian*

To

To kill Crab Lice.

Take a roasted Apple, and take the Skin and Core from it, and beat it in a Mortar with as much Quicksilver as will make it into an Ointment, and therewith dress the afflicted Places. *From a good Friend.*

For Nits and Lice in the Head.

Take three Ounces of Oyl of Olives, one Ounce of Wax, three Drams of *Stavesacre*, and as much Quicksilver, of these make a Salve, and anoint the Head all over, and it certainly kills the Nits and Lice. *Approved Cernel. Agrip.*

Another.

Take the Flowers of Madlin wort, boil it in Lee, and wash the Head. *Bayrus.*

Another.

Take Sandarach, or red Orpiment and Salt Petre, of each a Dram, *Stavesacre* two Drams; mix these together with Oyl and Vinegar, and anoint the Head with it. *Bayrus.*

To kill Caterpillars.

Take Fig Leaves Ashes, and cast it on the Root, and it destroys the Caterpillars. *Anat.*

Another.

Take Ox piss and Lees of Oyl, and boil them together, and it kills the Caterpillar infallibly, if you cast it upon the Trees or Bushes where they are. *Anat.*

Another.

Take a Gallon of Crabs, and steep them ten Days in Water, and sprinkle the Trees with the Water, and it kills the Caterpillar. *Cordanus.*

Another.

Take the Blood of an Ox or Sheep, then take the Dung of a Sheep out of the small Guts, while it is hot, and mix it with the Blood, and make small Baits of it, and let them dry in the Sun, and cast the Baits into the Water, and they will gather all the Fish together. *Approved Cornel. Agrip.*

Another.

Take the Blood of a black Goat mixed with the Lees of Wine and Wheat-flower make it into a Paste, and throw the Paste into the Water. *Approved Paxamus.*

Another.

Take a Quart of the Blood of a Calf and half a Pound of raw Veal shred small, then put them together in an earthen Pot,
and

and let it stand ten Days close covered, that no Air can come at it, then cast it into the Water, and it will certainly gather the Fish together.

Another.

Take Sheep's Dung and a small Quantity of Tar, mix it with Chamber-lee, and apply it Morning and Evening to the Root, Stalk, or Branch infested with Caterpillars, and in a very short Time it certainly kills them. *Approved.*

Another.

Take a Quart of the Morning-dew and mix in it Verdigrease, or for want of that take such a Quantity of the Juice of four Crabs, and mix a little Verdigrease in it, sprinkle the Root, Branch, or place so infested, and it certainly kills them. *Approved.*

To kill Flies.

Take white Hellebore, and steep it in sweet Milk, mix with it Orpiment, and sprinkle the Rooms and Places where the Flies come, and they will all die, *approved.*

Another.

Take Allum and Origanum, beat them and mix them with Milk, and sprinkle them as before, *approved.*

To

To gather the Flies together.

Take a deep earthen Pot, and lay in it beaten Coriander, and all the Flies in the House shall be gathered together, *approved Anatolius.*

To keep Cattle from Injury by Flies.

Anoint the Beast with Oyl, wherein Bakeler hath been boiled, and the Flies shall not come near him, *approved.*

The Art of taking Fish.

Take Thyme, Savory and Elder Leaves of each a Quantity, take the Suet of an Ox or Sheep, the Lees of Wine, and break this in a Mortar, then make it into little Balls, and throw them into the Water an Hour before you intend to fish, *approved Albertus.*

Another.

Take Mutton Suet and Garlick, mix it with red Wine, and make it into a Paste, cast it into the Water, as before, *approved Cornel. Agrippa.*

Another.

Take Origany and Elder Leaves of each three Drams, Frankincense and Juniper of each an Ounce; Wheat-flower a Quart, White-wine a Pint, roasted Hog's Liver three Ounces, beat all these together in a
Mortar,

Mortar, then let it all be bak'd in an Oven, and crumble it together in small Crumbs with a little fine Sand, then throw it into the Water, an Hour or two before you intend to throw your Nets, and the Fish of all Sorts will be gathered to it, *approved Cornel. Agrippa.*

Another.

Take Dolphinum beat small, and sift it through a fine Sieve, and throw it into the Water, and the Fish will so flock to it, that you may take them with your Hands, *approved Pliny.*

Another.

Take a good many dew Worms and distill them in a common still with a slow Fire, then take the Liquor, and put it into a glass Viol, put to it four Ounces of Quick-silver, and stop it very close, then put this Glass on a long Pack-thread that you may let into the Water without breaking, when it is in the Water it gives such a Light, that all the Fish will flock to it, *approved Pliny.*

To take Fish with your Hands.

Take Nettles and Cinquefoil, and stamp them together with the Juice of Housleek, take this in your Hand, and go into the Water,

Water, and stir it to and fro in the Water, and you may take them. *approved Cornel. Agrippa.*

Another.

Take dried Marjoram, Thyme and Elder Leaves, a convenient Quantity of each, mix them with Sheep's Blood, and let them dry in an Oven, and throw the Lumps into the Water. *approved Pliny.*

Another.

Take Hart-wort beaten small, mixed with Lime, and cast it into the Water when the Water is calm, and the Fish will greedily eat of it, and presently turn upon their Backs, and you may take them with your Hand, they are never the worse to eat. *Cornel. Agrippa.*

Another.

Take Coculus India, Cummin-seed, old Cheese, and Wheat-flower; make of these a Paste with Brandy, and cast small Pieces like Pease into the Water when it is calm, and all that shall eat thereof will presently come to the Water-side, so that you may take them with your Hand, as hath been often experimented by *Miraldus.*

Another.

Take Nard of Crete four Leaves, Cyprus, one Leaf, Smienii so much as a Bean,
Cum-

Cummin seed so much as you can take up betwixt your three Fingers, and as much Fennel-seed; beat them altogether verysmall, make them into a Paste with Wheat-flower, and use it as before, and you will soon see the Effects. *approved Tarentinus.*

To catch Eeles.

Take Sea-stone Wort one Ounce, of Sea, Onyons one Ounce; mix them together and throw it into the Water as before. *Tarentinus.*

To catch Crab-fish.

Take small Willow-Twigs as big as a Finger, slit them at one end, and put into the Slits the Guts or Pieces of a Frog, and place the Stick in the Water in several Places where the Crabs are, and they will immediately come out of their Holes; and you may take them in your Hands. *approved. Cordaus.*

Another.

Take Frogs, cut them in Pieces, and put them into a Basket, and hang them in the usual Places, where the Crabs are, and they will come into the Baskets. From a Fisherman of his own Experience that used the Trade.

To take all Sorts of Birds, Fowls, &c.

Take such seed as the Fowls or Birds
are

are wont to feed on, and lay it to soak in the Mother of Wine, mixed with the Juice of Hemlock, and when it is well soaked throw it in the Places, where the Fowl or Birds feed, and they will be presently drunk, and lose their Senses and you may take them with your Hand, *approved Albertus.*

Another.

Take the Roots of white Hellebore beaten small, and mix it with any common Seed, and throw it as before, the Fowl are never the worse to eat, *Democritus.*

Another.

Take Wheat or any other Grain, and boil it with white Orpiment, and throw the Grain, where the Fowl or Bird comes, and they will die, and be as wholesom to eat, as if they were shot or taken in the Net, *approved Democritus.*

To keep the Birds from Fruit.

To scare the Birds from Fruit, Corn-stalks, &c. hang Garlick down the Branches of the Trees or Corn-stalk, and they will not come near, *approved Democrates.*

To take Fowls.

Take Onyon grated small, and mix it with the Seeds or Grain, the Bird or Fowls eat, and it makes the Bird or Fowl drunk immediately, *approved.*

Another

Another.

Take double distilled Brandy, and soak Grain in it, and it makes the Fowl drunk.

To take Partridges.

Take Wheat-flower and make it into a Paste with good Wine, break it into small Pieces, the Bigness of a Pea ; and scatter them in the Places where the Partridges come, and they will be so drunk, that you may take them with your Hand. *approved Beritus.*

To take wild Ducks.

Take a tame Goose or Duck, and observe in what place the wild Geese and Ducks feed, then strew in that Place seeds soaked in Wine Lees, or in the Water, wherein white Hellebore is boiled, and let your tame Duck or Goose remain tied by a String near that Place, to bring the wild Geese or Duck to settle there, and you may catch twenty wild Geese at a Time, for they will be immediately drunk. *Beritus.*

To gather together, and kill the Frogs.

Take Ox, Sheep or Goats Gall, and bruise it by the Water-side, and the Frogs will gather to it.

T H E



T H E
C O N T E N T S.
P A R T. I.

C H A P. I.

TH E *Art and Mystery of dying Silks, Stuffs, Cloth, Feathers, &c. in the most curious and delightful Colours; with the Manner of ordering, making, and preparing them, &c.* Page 5

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